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A Report
ON
THE SURGERY OF THE PERITONEUM.

Made to the Sixth International Congress of Obstetrics and Gynæcology held in Berlin, Sept. 9th–13th, 1912,

BY H. MACNAUGHTON-JONES, M.D.,
M.CH. Q.U.I., M.A.O. (HON. CAUSÂ) R.U.I.,
F.R.C.S. IREL. & EDIN.,
FORMERLY UNIVERSITY PROFESSOR IN THE QUEEN'S UNIVERSITY.

GENTLEMEN,—In venturing to undertake the duty of *raconteur* for Great Britain and Ireland to the Sixth International Congress of Obstetrics and Gynæcology at Berlin, on the important subject of the Surgery of the Peritoneum I must trust to the considerate indulgence of my colleagues. That subject covers so vast a field of all the essential elements of obstetrical and gynæcological surgery, and embraces so large a number of vital points in operative technique, that it is not possible to do more than the barest justice to it in such a short summary as I present to the Congress. The report is based on the lines of the communication made by the President of the Congress—"Ueber die peritoneale Wundbehandlung. Was verträgt das Peritoneum, was nicht?"[1] That thesis enters into the various sources of irritation of the peritoneum, whether mechanical, chemical, or from organic fluids, and those morbid processes due to the presence of micro-organisms. Such considerations must necessarily include every preventive precaution taken, from the previous preparation of the patient to the end of the abdominal toilet, and her immediate subsequent management. It embraces operator, assistants of all kinds, the character and preparatory treatment of all the material employed, the most perfect method of sterilisation, the influence on technique of pre-existing septic or suppurative conditions, and the best method of preventing evil consequences from these.

With the object of eliciting the views of a number of the leading gynæcologists throughout the United Kingdom I circulated a series of questions so as to ascertain what are their present practices and opinions, mainly on the following points. 1. The antecedent conditions, pathological and clinical, which predispose to peritonitis, and the prophylactic measures adopted in the event of their presence. 2. The steps taken before and at the time of operation to secure, as far as possible, ideal asepsis. 3. Views as regards moist or dry treatment of the peritoneum during operation; the resort to lavage, the tamponade, and drainage; also the treatment by camphorated oil. 4. The materials used for sutures and ligatures. 5. There was inquiry as to any researches into the relative frequency with which various germs were found in secretions or exudations, as also the relation of gonorrhœa to peritonitis. 6. Information was further invited as to the spread of infection of septic patients after operation, and the preventive measures adopted in the presence of premonitory symptoms or signs of peritonitis. 7. Lastly, opinions were asked with regard to the use of vaccines.

With the object of making the report as widely inclusive as possible I sent these queries to some 50 representatives of all the London teaching schools and special hospitals, and to the various provincial universities in England, Scotland, and Ireland, as well as to several gynæcologists of the larger general and special hospitals in the provinces. The report includes the substance of the replies from some 70 representative teachers and surgeons. The names of those are:—

H. Russell Andrews, T. Gelston Atkins, Miss Aldrich-Blake, J. W. Ballantyne, Blair Bell, Comyns Berkeley, Stanmore Bishop, G. F. Blacker, Victor Bonney, R. T. Brewis, H. Briggs, A. C. Butler-Smythe, Sir J. W. Byers, S. J. Cameron, J. W. Campbell, C. P. Childe, Tennison Collins, Sir Halliday Croom, J. H. Dauber, A. Donald, Alban Doran, T. Eden, F. Edge, J. S. Fairbairn, R. Favell, W. H. Fenton, Haig Ferguson, W. Fothergill, W. J. Gow, W. S. A. Griffiths, T. B. Grimsdale, F. W. Haultain, J. B. Hellier, T. A. Helm, Eardley Holland, Miss M. Ivens, Robert Jardine, Henry Jellett, Furneaux Jordan, C. Keep, Munro Kerr, R. J. Kinkead, A. H. Lewers, Cuthbert Lockyer, Rankin Lyle, F. J. McCann, Miss Louisa McIlroy, J. D. Malcolm, J. Marnoch, G. B. Marshall, Drummond Maxwell, Mansell Moullin, Yelverton Pearson, John Phillips, H. J. Playfair, G. Drummond Robinson, Amand Routh, A. W. Russell, Mrs. Vaughan Sawyer, Mrs. Scharlieb, Sir William Smyly, Herbert Spencer, W. Swayne, H. P. Symonds, J. H. Targett, Walter Tate, Hastings Tweedy, Mrs. P. Willey, Herbert Williamson, T. Wilson, and T. H. Wilson.

The bearing of this report is on gynæcological rather than obstetrical procedures, though where operative interference is contemplated or carried out the principles involved apply equally to both. We may divide the subject into these heads:—

1. The conditions, pathological and clinical, which predispose the peritoneum during operative interference to infection and inflammation, and the prophylactic measures best calculated to prevent or combat such.

2. Antecedent to and during an operation, what are the most efficient means of preventing infection or irritation of the peritoneum? This necessarily demands a decision as to the most perfect technique under the various conditions in which the peritoneal cavity has to be opened, either from the abdominal or vaginal side. Here we have to include reference to drainage, the tamponade, and the materials employed during an operation.

3. In the face of exceptional risk to the peritoneum, or when there are premonitory symptoms of peritonitis following an operation, what are the most active and reliable means at our command for subduing it?

4. How far have bacteriological researches into the nature of the micro-organisms which are present during or after an interference with the peritoneum thrown light on antiseptic measures, and the value of vaccines or serum as prophylactics?

Incidentally, the discussion on the second and third of these heads involves exceptional conditions such as arise when we are dealing with the complications of extra-uterine fœtation, the presence of large pus cavities, irritative or infective cyst contents, hæmatoceles, uncontrollable hæmorrhage, malignant states, and where the bladder or bowel, through injury or pre-existing fistulæ, opens into the operative area.

I propose in the first instance to give in abstract a summary of the conclusions which I have epitomised from the replies of British obstetricians and gynæcologists. I cannot sufficiently express my thanks to these surgeons for the trouble they have taken to answer, in many cases exhaustively, my queries.

Predisposing causes of infection and inflammation, and prophylactic measures.—I divide these under three heads—(1) general constitutional conditions; (2) local complications existing before operation; and (3) those causes which are the direct result of the operation itself. Among the first are anæmia, previous severe hæmorrhages, tuberculosis, leucocytosis, alcoholism, organic renal disease, diabetes, and influenza. Included in the second are gonorrhœal infection, tuberculosis, appendical complications, extensive adhesions, fistulous communications with bowel and bladder, fæcal concretions in the intestine, cancer of the genitalia, escape of fluid from dermoid cysts, ruptured tubal gestation, and torsion of the pedicle. In the third group—those which arise during operation—we include rough handling and exposure of bowel, injuries to the bowel and bladder, want of care in the separation of adhesions, neglect of careful isolation of infected areas and pus cavities, defective peritonisation and covering of stump ends, too violent swabbing, the use of irritating antiseptics, absence of drainage where such is indispensable, defective hæmostasis, too protracted operation, and, *overshadowing all, defective asepsis.* The second division of the subject really resolves itself into the steps taken prior to, during the performance of, and immediately following an operation to prevent infection or irritation of the peritoneum.

Prior to operation.—On the following points there is a general consensus of opinion, and virtually of practice: (1) Postponement of operation, in the face of local septic conditions, extreme anæmia, and prolonged hæmorrhage; (2) special attention directed to the condition of the mouth, nose, and throat of the patient; and (3) thorough evacuation of the bowel, and determination of the quantity and constitution of the urine.

Preliminary local treatment.—When possible, complete sterilisation of vulva, introitus, and vagina for some days previously by scrubbing, douching, and antiseptic tampon; in carcinoma of the cervix, cauterisation with curetting in addition. In those cases where the condition is unfavourable for a complete or radical operation, Mr. Childe (Portsmouth) has the vagina scrubbed with biniodide of mercury

[1] Sonderabdruck aus Monatsschrift für Geburtshülfe und Gynäkologie, Band xxxiv., Heft 2, 1911.

for a week previously, all growths curetted away, and the cautery applied, with daily irrigation of the vagina with the biniodide.

Essentials for asepsis.—We now approach the consideration of all those details which have to be included in a perfect aseptic operation, in which the peritoneum is attacked; these embrace the steps taken before, during, and after the operation. I may first summarise those precautions which are practically universally adopted throughout the United Kingdom. Before doing so I may interpolate that the bactericides which are most generally employed in the relative order of frequency are biniodide of mercury (1 in 500 to 1 in 2000), either with or without ether, alcohol, rectified or methylated spirit; perchloride of mercury (1 in 500 to 1 in 10,000) with or without ether, alcohol, or methylated spirit; "sublamin" (various strengths); iodine in solution, and tincture of iodine (in varying strengths); acetone with ether; turpentine; carbolic acid; lysol; formalin; lysoform; ethylene dichloride; permanganate of potash and oxalic acid. Of these, for inside the peritoneum, biniodide of mercury is the one principally employed. For the hands of the operator, or for use during the operation, biniodide of mercury is also most favoured; sublamin and the perchloride of mercury come next. Some prefer the permanganate of potash and oxalic acid process for the hands. Iodine, after previous careful preparation of the abdomen, holds first place for the sterilisation of the patient's skin. Others combine the use of acetone, biniodide, or ethylene dichloride previous to the application of the iodine, while a few use both turpentine and carbolic acid or lysol previous to its application. Hastings Tweedy, after previous sterilisation with ether and biniodide in spirit, finally paints the skin with a saturated solution of picric acid in spirit, which he says "hardens and cornifies the epithelium, and locks the bacteria into the depths of the skin." This he has used for years instead of iodine. Whatever plan is followed, the skin of the patient is previously prepared, in some instances for days beforehand, by baths, repeated washing with ether soap, packs of perchloride or biniodide, and the iodine application is made some time before, and again at the time of operation.

All British operators are practically unanimous in the adoption of certain rules—the use of caps and masks; complete isolation of the operative area, with protection of the wound margins; limitation of any possible source of infection; gentleness in the separation of adhesions, the avoidance of bowel handling, and the exclusion of any irritating antiseptics inside the peritoneal cavity; the employment of normal sterilised saline serum for wiping and cleansing; scrupulous attention to hæmostasis; the use of sterilised rubber gloves, which are changed when required through any suspicious soiling; the retention of instruments in mild antiseptic solution during operation; their reduplication or re-sterilisation by boiling if necessary; repeated ablution of the operator's and assistant's hands in sterile water, with or without a disinfectant (such as 1 in 2000 of biniodide of mercury; carbolic, 1 in 40; lysoform, 1 in 100, or weak lysol; a final soaking in perchloride or biniodide with alcohol). In addition to these preventives, there are the usual stringent rules regarding cleanliness of the operator's person, and these are extended to all who are permitted to take any active part in the operation.

Touching on special prophylactic measures: (1) in anæmic states, and when vitality has been greatly lowered, the exhibition of strychnine before operation; the preliminary use of artificial serum, alone or with glucose; caution in the use of purgatives; leucocytic tests, prophylactic doses of polyvalent serum; (2) in suppurative conditions or where there is a local septic collection, vaccine-therapy, autogenous if possible; (3) of primary importance is close attention to the bowel, and where there has been chronic constipation the removal of all fæcal masses and the excitation of intestinal peristalsis by such means as the subcutaneous use of eserine and pituitary extract. In diabetic conditions postponement of operation and preliminary anti-diabetic treatment. Dr. Balfour Marshall (Glasgow) reports that the use of bismuth subnitrate (20 gr.) with salol (5 gr.) given three times daily before food prevents flatus. Emphasis is laid on such celerity in operating as is compatible with completeness of technique and efficient hæmostasis. The great majority of operators use swabs of sterilised gauze, wrung out of warm sterilised water, or normal saline, for cleansing and mopping out surfaces, and the same material is used for packing off the intestines and isolating pus cavities. A few prefer natural sponge for cleansing.

Dry or moist treatment of the peritoneum.—As to whether dry or moist treatment of the peritoneum has been followed, over two-thirds of those who replied to this question were in favour of dry. Many use moist mops wrung out of warm saline in the first instance, and then the peritoneum is finally wiped dry. A separate reference must be made to lavage, the tamponade and drainage.

Lavage.—With regard to lavage, there is, generally, an obvious disinclination, save under exceptional circumstances, to resort to it. Over two-thirds of those who have replied to my question as to its use only very seldom employ it; the remaining third never resort to it. Only a few speak strongly in favour of its general use. The exceptional complications assigned for its employment are: (1) when a quantity of blood or clots remain; (2) when there has been much handling and the peritoneum has been soiled; (3) for the removal of the contents of ruptured cysts that have escaped; (4) after bleeding in ectopic cases, and in tubal hæmatocele; (5) when dermoid fluid escapes; (6) in amniotic soiling (Lockyer); and (7) when there has been a dissemination of septic matter, and in acute septic peritonitis. On the other hand, some surgeons are entirely averse to its use in septic cases, and only employ it when the abscess sac is completely shut off. Many resort to it in anticipation or the threatening of shock, when much blood has been lost, and in anæmic cases. Normal sterile saline is nearly always employed, and several surgeons leave a quantity of this fluid in the abdominal cavity at the close of the operation.

The use of the tamponade.—We have a greater diversity of opinion as to the effects and utility of this procedure. By the great majority of surgeons it is seldom used. Some are distinctly averse to its employment, and only a comparative few speak very favourably of it. The conditions which are set forth as indicating the tamponade are: (1) general and uncontrollable oozing; (2) deep hæmorrhage in the pelvic cavity; (3) where there has been extensive soiling from dermoid contents or escape of pus, or destruction of the peritoneum; (4) advanced ectopic gestation; (5) hæmatocele; (6) to cover raw surfaces and protect loops of intestine; and (7) to shut off infected areas. It acts (Fothergill) by setting up a plastic exudation which shuts the tampon off. This localised peritonitis offers one of the objections to its use. Adhesions are apt to form, and if it be retained too long there is difficulty in its removal, and irritation of the peritoneum. Consequently some advise that the period of retention should not exceed 24 hours, or at the most 48. There can be little doubt that, as insisted on by Dr. Eden, the tamponade is often necessitated by a faulty technique, or some mishap in the operation, and that it does interfere (Fothergill) with the normal function of the peritoneum. It should never be used as a drain. Some, when they resort to it, make a counter opening either through the abdominal wall or the vagina (Aldrich-Blake). It must be admitted that it may, and does occasionally, act as a source of irritation to the peritoneum, has a tendency to arrest the peristalsis of the bowel, to create flatulence, and to cause vomiting. Consequently, some only employ it when draining the pelvis per vaginam; many object to it altogether, and if forced to use any pressure prefer the Miculicz drain. They reserve its use for below the pelvic brim, and the tight packing of Douglas (Jellett). After its removal in 36 hours the tampon is replaced by a rubber tube.

As to the material for tamponade, the majority use plain sterilised gauze; others, iodoform, or bismuth gauze (Eden). Campbell (Belfast) surrounds the gauze with waterproof cambric to facilitate removal, and, like others, combines a rubber tube with the gauze. Herbert Spencer in special cases, such as where a tumour has caused an opening into the bowel, uses a tampon of iodoform gauze which is not removed for at least eight days; he never has had any severe toxic effects.

Drainage.—There is a general agreement as to the value of drainage under certain conditions, but (as in the case of the tampon) with earlier operations, the results of a more accurate diagnosis, and a more improved technique combined with perfect asepsis, the conditions which call for drainage are now so seldom met with that the need for it becomes less and less. The feeling of most surgeons is perhaps thus

expressed: "Drainage" involves a risk never to be run unless it be unavoidable, and this contingency should almost never happen in a thoroughly aseptic operation. Still, there are occasions when the drain is advisable, and, at times indispensable; such are the following: (1) When oozing continues, and further prolongation of the operation is fraught with danger, or where there is an uncertainty as to hæmostasis or efficient ligation; (2) when there has been an escape of pus or septic matter, which it has been difficult or impossible to isolate or limit to the pus cavity or infected area; or where portion of an abscess sac is left—i.e., in some cases of ectopic gestation; (3) when the bowel or bladder has been seriously injured and there is danger of contamination; (4) in some ascitic cases and where suspicious contents of dermoid or other cysts have been spilt; (5) in acute general peritonitis of a septic character; (6) in some infectious appendical complications where there has been a septic abscess or rupture of the bowel; (7) in some cases of myomectomy in which the peritoneum has been roughly handled and there is contamination from septic surroundings; and (8) in infection from carcinoma where Wertheim's operation is performed, and in other cases of total hysterectomy.

As to the nature and direction of the drainage, this is effected either by rubber (rarely glass), generally perforated, and large enough to contain a loose strip or ribbon of iodoform or sterile gauze; at times gauze or rubber drain alone. As pointed out by some surgeons, gauze may become a plug rather than a drain. While it is suitable for serum and blood, the rubber tube, encircled in iodoform gauze or containing the strip of gauze as mentioned, is preferable for pus. Gauze is dangerous if there be loops of adherent bowel in the pelvic cavity. Miss McIlroy uses a perforated rubber tube which has a funnel end; the tube is carried from the abdominal wound into the vagina, and is useful in acute infective conditions, for subsequent lavage of the whole pelvis, by saline solution; this is carried out every six hours. In certain cases of septic peritonitis Ferguson makes a lateral opening in the abdominal wall and employs a cigarette drain. Others, under these conditions, drain through the flank, and Furneaux Jordan carries a loose gauze drain through the vagina. Drummond Maxwell always drains in the presence of broad ligament cellulitis with attendant perimetritis.

Obviously the direction of the drainage must depend on the character and needs of the individual case. It may, however, be taken as a general rule that in all septic cases the route of election is by the vagina and through Douglas's pouch. In other instances the suprapubic end of the wound is the favoured position, and the tube or gauze is carried to the bottom of the pelvis. The adoption of the semi-recumbent or Fowler's position adds greatly to the efficacy of the drain, especially if the latter be accompanied by proctoclysis. Drummond Maxwell lays special emphasis on the advantage of draining through the posterior fornix by opening into the pouch of Douglas and drawing the gauze down into the vagina. He thus separates and protects the healthy adnexa of one side during the removal of a diseased tube or ovary from the other. Balfour Marshall (Glasgow), on the other hand, packs the pelvis with gauze, closes the abdominal opening, and completes the toilet. He then places the patient in the lithotomy position, thoroughly disinfects the vagina, and makes an incision with scissors through the posterior fornix, drawing the gauze into the vagina, which is further packed with gauze. The pelvic gauze is not disturbed until the third day, and then day by day a portion is drawn into the vagina, until between the fifth and seventh days all is removed. The late Stanmore Bishop passed a large tube into Douglas's pouch through a suprapubic stab and used it for washing out during an operation.

Ligatures and sutures.—Inquiry as to the material used for ligatures and sutures, and the reasons for preference of one kind over the other, shows that for intraperitoneal work, as also for closing the peritoneum, the choice is divided between catgut (whether iodised, chromic, sulpho-chromic, or cumol, prepared in different ways) and silk sterilised by boiling, or linen and celloidin thread, both also sterilised by boiling. All the latter are kept in various antiseptic solutions and re-boiled before use. For closing fascia catgut is principally used; for through-and-through sutures and for closing the skin silkworm gut which has been boiled. The great majority use silk for ligatures of large vessels and pedicles, and catgut for suturing. Others prefer linen or celloidin thread to silk, but the latter is mainly used for suture of the intestine. Where there is pus present catgut is preferred. Some surgeons, a minority, use catgut only for all purposes, and some, fewer still, silk or linen thread. Whatever material be used, it is as a rule passed through a long and exhaustive process of sterilisation beforehand. Catgut, finally prepared by the iodised process, appears to be the favourite material. Herbert Spencer emphasises the fact that he never uses catgut, contending that sooner or later it will cause tetanus. The better biting powers and security of silk or thread is the reason generally assigned for its employment. The dislike to bury any non-absorbable material within the peritoneal cavity, or where pus has been present, is assigned as the reason for the preference for catgut. Van Horn's 30-day gut is used by different operators.

Personal practice.—I should like here briefly to summarise what has been for several years my own practice with regard to the points touched upon to this part of the report. I have nothing to add to what I have already said as to the predisposing causes of infection and inflammation, nor, indeed, to the prophylactic measures indicated when there are premonitory signs or symptoms of peritonitis present. I believe emphatically in postponement of operation, rest in bed, thorough evacuation and cleansing of the lower bowel, repeated sterilisation of the external genitalia and vagina, evacuation of localised purulent collections, and using every means in cases of anæmia and lowered vitality to resuscitate and restore the vital power of the patient. I am in the habit of administering to the patient before operation (the night before and the morning of) scopolamine (1/100 gr.), morphia (1/6), and an hour previous to the actual operation an injection of atropine and strychnine. I believe that the soporific and calmative effect of the scopo-morphine is most beneficial both before and immediately after operation, and, in my experience, it lessens the tendency to sickness and the unpleasant retching which follows the chloroform. This is especially so if the chloroform be administered by a Harcourt's regulator, so that the quantity given is known all through the operation and is reduced to the minimum amount required—as a rule, from 0·5 to 1 per cent.

The preparation of the patient and the sterilisation of the abdomen are carried out on the lines already indicated. But in the instance of the vagina (which has been previously douched with mercurial or formalin, and tamponed with chinosol) it is finally scrubbed with izal soap and fibre sponge (Holzwolle), and, lastly, it is mopped out several times with gauze on spongeholders with 1 in 1000 perchloride of mercury in alcohol. The same kind of sponge is used for the final scrubbing of the abdomen, with izal soap. The skin is then thoroughly rubbed with alcohol and perchloride; next washed over with liquid "Opsopon" soap; and, lastly, rubbed with ether. Once the peritoneum is opened its edges are not again interfered with, as these are secured by my small clips, to which wire with weights at the end are attached. These hang over the sides of the abdomen under the sterilised coverings that surround the wound. All swabbing is done with clamp forceps, with wipes or mops, wrung out of sterilised water, or 1 in 2000 to 5000 of formalin. There is no rough handling or wiping of the peritoneum, from first to last. Soiled surfaces are always carefully but gently cleaned. All hands are repeatedly re-washed in running lysoform. Personally, I only use gloves in septic cases or in any examination or preparation of the patient. The assistants and nurses wear them. Instruments are duplicated or re-boiled when necessary.

I rarely use any silk. The catgut (Boehme, 54, Orienburgerstrasse, Berlin) I employ is of two kinds; one is prepared by Bergmann's method (juniper oil, perchloride of mercury, and alcohol). It has undergone repeated changes on reels for some six months at least before use. It is taken direct from its solution. It is of seven different sizes, and the strongest strands are used for pedicles and for some ligatures; also for fascia and the recti sutures. The other gut I use is Kronig's (Dronke, Cologne),[2] taken direct from the boxes, and placed in weak formalin solution at the time of operation. I use it to ligature fine vessels, for all over-sewing, and closure of the peritoneum.

[2] Münchener Medicinische Wochenschrift, No. 44, 1901.

Sometimes I use Van Horn's 20 to 30 day gut, but this is mainly in vaginal operations. The skin, as a rule, is closed with Michel's clips fortified, if need be, by celloidinzwirn, which has been previously boiled and taken out of formalin solution.

I resort to lavage very rarely, and only under the conditions already mentioned. I prefer any delay compatible with the patient's safety, in order to secure perfect hæmostasis and stoppage of any oozing, to the employment of the tamponade. Only when it is unavoidable do I use a drain, such as where there has been much escape of septic pus, soiling from ascitic fluid and cyst contents, or when there is a prospective risk of hæmorrhage. The character and direction of the drain are determined by the individual circumstances of the case. As a rule I prefer for the abdominal drain the rubber tube, with or without iodoform gauze, and the gauze drain through the vagina. In some exceptionally bad cases of ventral hernia, in which there has been great protrusion of the bowel, I have used buried mattress sutures of silver or bronze aluminium wire, and have had no ill results. Some of these patients have been operated upon years since, and are still alive and well.

Bearing on the question raised by Professor Bumm as to the possibility of infection arising from the proximity of septic patients after operation I have had only a few instances reported to me, and these have not occurred in recent years. Dr. Lockyer reports a case in which a house surgeon dressed a case of erysipelas before assisting in a Wertheim. The patient died from acute toxæmia in 48 hours, and the house surgeon died from phlegmonous cellulitis of the arm a few days later.

Gonorrhœal infection.—Inquiry as to the relationship of gonorrhœa to peritonitis has elicited a practically unanimous opinion on these points: (1) That it rarely leads to general peritonitis, but very frequently to suppurative adnexal inflammations and pelvic perimetritis; (2) that when there is acute inflammation resulting from gonorrhœal inflammation the best course to follow is to treat the case on general principles and postpone interference until the acute stage is over; and (3) that when operation is called for and the affected adnexa are removed a vaginal drain should be inserted and great care be taken (Vaughan Sawyer) not to disturb adhesions. Vaccine therapy is advocated by Miss McIlroy. Routh advocates waiting until the pus is sterile, and thinks that operation may thus be avoided. In a remarkable case under my care I had emptied the uterus of an anencephalic fœtus at the fourth month for a profuse gonorrhœal endometritis. After convalescence, and when all discharge from the uterus had ceased, symptoms of general peritonitis suddenly appeared. After waiting a few days I opened the abdomen, and found a creamy exudate covering the pelvic peritoneum, and pus issuing from both the fimbrial orifices of the tubes. The exudate was carefully wiped off with formalin mops, double oöphorectomy was performed, the uterine cornua being included. The patient did well. Gonococci were found in the pus-exudate.

Preventive measures (in the presence of premonitory signs or symptoms of peritonitis, local or general).—In addition to the general treatment by attention to the bowel, the administration of calomel, and enemata, re-opening the wound and drainage where indicated, the general practice includes the adoption of the Fowler position, the administration of continuous saline by the rectum (proctoclysis J. B. Murphy), the use of pituitary extract, and eserine. Opinions vary as to the reopening of the wound, some surgeons being decidedly hostile to the step, but the great majority are in favour of reopening and draining, generally through the posterior fornix of the vagina.

In my own practice when post-operative trouble arises I rely mainly on calomel, injections of oil into the bowel, previous to the administration of special carminative enemata; proctoclysis, with the adoption of the semi-recumbent or Fowler's position. Pituitary extract I have found most valuable in exciting peristalsis of the bowel. The stomach is washed out for vomiting, and atropine with morphia subcutaneously administered for the same. I only reopen the wound as a last resource when I suspect serous or purulent accumulation. Then I drain. The judicious use of stimulant in such cases is indispensable.

Bacteriological research.—Comparatively few British operators have made systematic examination of the different fluids found during or after operation in order to determine the relative frequency with which different bacteria are met with in infective states of the peritoneum. The replies which I have received are practically unanimous to the effect that post-operative peritonitis is now of extremely rare occurrence. Indeed, with such strict aseptic precautions as are now universally adopted in this country one can readily understand that this must be so.

The conclusions of those who have made researches into the order of frequency with which various infective micro-organisms have been found are as follows:—Alfred Smith: (1) bacillus coli, (2) staphylococcus pyogenes aureus, (3) staphylococcus pyogenes albus, (4) streptococcus, and (5) pneumococcus (extremely rare). The last-named, he says, would be found more frequently if blood agar were used as a routine culture medium, and the bacillus coli did not completely outgrow it. Miss McIlroy has made extensive examinations, and has found that the staphylococcus aureus and bacillus coli are the most common; after these streptococcus. The bacillus coli outgrows the pneumococcus. Wilson (Birmingham) gives in their order the streptococcus, bacillus coli, and staphylococcus aureus. In one case after rupture of the uterus he found the bacillus aerogenes capsulatus. Cuthbert Lockyer found the latter organism also in a sloughing wound after Wertheim's operation and the streptococcus longus. Blair Bell gives the bacillus coli as the most frequent, and in obstetric cases the streptococcus; Haultain the bacillus coli more frequently than either the staphylococcus or streptococcus. Campbell, of Belfast, considers that the staphylococcus and streptococcus supplant the gonococcus. Mrs. Scharlieb has found the streptococcus, staphylococcus aureus, and bacillus coli, and Mrs. Vaughan Sawyer has found in one case the streptococcus, and in another the staphylococci pyogenes albus and aureus, after a Wertheim. Professor Byers, as the result of his researches, places them in this order: streptococcus, bacillus coli, pneumococcus, staphylococcus, and gonococcus (rarest of all).

Vaccines.—As to the value of vaccines in arresting the spread of infective peritonitis, over 75 per cent. of those who have expressed an opinion in the matter have done so either unfavourably or say they have had no experience of their use. Miss McIlroy expresses the opinion that in subacute conditions they arrest the spread of infection and soften existing adhesions. She is at present making researches as to their effect in acute inflammation. Dr. Gow thinks that early vaccine may be effective; T. G. Atkins and Haig Ferguson employ polyvalent serum with benefit. Jellett approves of vaccine for puerperal septicæmia if used in time, within 24 to 48 hours after the onset of the infective invasion. To be of use, the vaccine must be autogenous. Tweedy and McCann speak in favour of vaccine. Mrs. Scharlieb and Mrs. Vaughan Sawyer are strong in their praise of autogenous vaccine; stock vaccines the latter says have little effect. Blair Bell is favourable only to gonorrhœal or tubercular vaccine, and Routh to their use in localised staphylococcus or streptococcus invasion. Professor Byers considers vaccines useful for bacillus coli, pneumococcus, and staphylococcus, but not much use in the streptococcus infection.

Harley-street, W.

AMŒBIC COLITIS IN INDIA:

PREVALENCE, DIAGNOSIS, AND EMETINE CURE.

BY LEONARD ROGERS, M.D. LOND., F.R.C.P. LOND.,

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I HAVE already recorded evidence indicating that my new treatment of amœbic disease by hypodermic injections of soluble salts of emetine promises to prove a rapid and radical cure of these hitherto intractable conditions, so any additions to our knowledge of the prevalence and diagnosis of the disease will be of great practical importance at the present time. During my first year in Calcutta in 1900 I recognised the occurrence of amœbic dysentery, which I believe had not previously been discovered in India, and reported my observations in 1902, adding to them in the following year. Since then I have gradually been accumulating much further experience regarding the prevalence of

amœbic colitis in Lower Bengal, and may now record the following data:—

The Relative Prevalence of Amœbic and Bacillary Dysentery in the Calcutta Medical College Post-mortem Records.

	Primary.	Complicating—	Total
Amœbic	35	{ Liver abscess ... 43 } { Other diseases ... 2 }	80
Bacillary	27	{ Kala-azar ... ... 8 } { Other diseases ... 10 }	45

It appears from the above figures that the amœbic form of dysentery is the more frequent primary cause of death, while if cases in which it is found complicating liver abscess, &c., are included, together with terminal bacillary dysenteries, then the protozoal disease is responsible for nearly twice as many fatalities as the bacillary one in Calcutta.

The Relative Prevalence of Amœbic and Bacillary Dysentery Clinically.

During the last nine months I have carefully investigated all the dysentery cases under my care in the Isolation Ward at the Medical College Hospital, examining the stools repeatedly for amœbæ, and doing serum tests with both Shiga and Flexner types of bacilli and making cultures in most of the non-amœbic cases. The results show 31 certainly amœbic cases, and only 14 in which those organisms were not demonstrated, in most of which evidence of the presence of the bacillary infection was obtained. Since the rains set in the proportion of amœbic cases has been even higher than is shown by the above figures, so that by the end of the year the proportion is likely to be greater than at present. Still, bacillary cases are also sufficiently plentiful to make Calcutta an ideal place for studying the two diseases.

Grieg and Wells[1] have recently shown that in Bombay the amœbic variety is also the more common one, so it is clear that in the damper parts of India, at any rate, this variety is the prevailing type, but accurate data are wanting as regards most parts of India on this important point. In some of the Bengal jails Forster[2] found bacillary dysentery to preponderate, but he also met with the amœbic variety, while I have recently found it in one of the Calcutta jails, so further work is also required on the cases in these institutions.

[1] Scientific Memoirs, India, No. 47.
[2] Transactions of the Bombay Medical Congress.

The Seasonal Incidence of Dysentery in Relation to Rainfall and Temperature in Different Parts of India.

I have recently studied the monthly incidence of dysenteries as a whole in relationship to meteorological conditions in different areas of India with a view to ascertaining if it varied in very wet and comparatively dry parts respectively to such an extent as to indicate the probability of the two types having distinct distributions over the country. For this purpose I worked out the average monthly admission rates per 1000 for the five years 1906–10 in the jails as furnishing the most reliable data, for those of the British and Indian armies yield much smaller figures and are vitiated by the varying strengths due to moves to the hills or long leave of many men during the hot seasons. The diagram, or chart, includes the figures for each of the areas of Northern India from easternly humid Assam and Lower Bengal to the very dry North-west Frontier, and thus illustrates the greatest possible variations in the climatic conditions. The principal results of this study are briefly the following.

As the tracings all represent admission rates per 1000 they show the relative prevalence of dysentery in the different areas dealt with. The disease is thus seen to be very common in damp, but comparatively cool, Assam—namely, 128·8 per 1000; to reach its maximum of 185·8 in damp and hot Lower Bengal and Orissa; to decline to 73·8 in the hot, but comparatively dry, Behar and eastern portion of the United Provinces; and to fall to a minimum of 41·5 and 50·6 in the hot and very dry Punjab and western part of the United Provinces, where the rain is only about one-fourth of that of Lower Bengal.

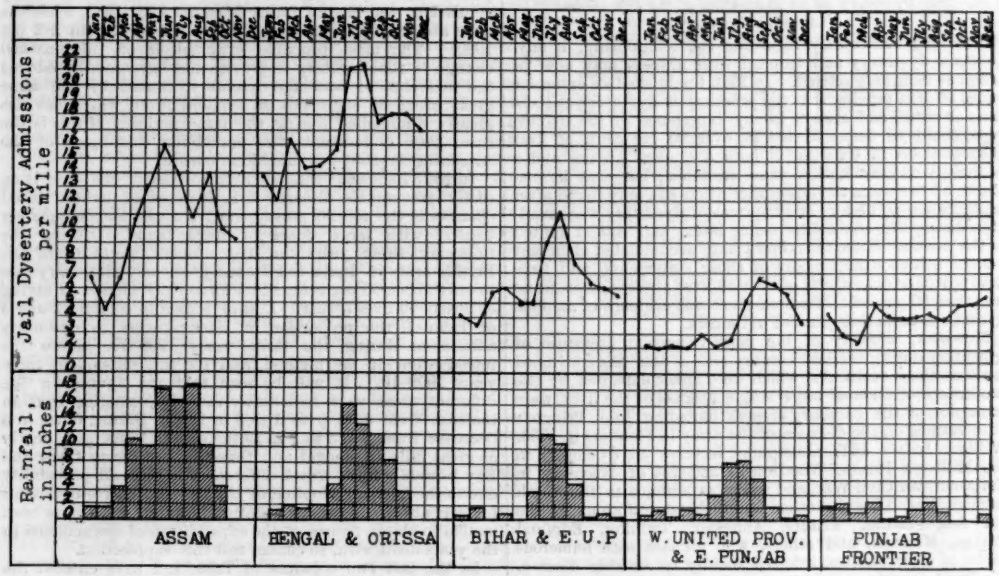

Chart of monthly jail dysentery admissions per 1000 and monthly rainfall.

The general curve of the seasonal incidence, however, is the same over the whole of the area which receives the moisture-bearing monsoon currents—namely, from Assam to Delhi and the east of the Punjab, but with a decreasing prevalence from Bengal to the Punjab, roughly proportional to the amount of the monsoon rains from July to October. Moreover, the main rise in the dysentery prevalence begins early in Assam, where the rains commence in April or May, and gets gradually later with the retardation of the onset of the monsoon as we travel westward. In addition to the main rise in the dysentery curve during the rainy season there is also a small increase in March with the rise in the mean temperature to about 75° F. in the early hot weather, which is best seen in the tracings of the Lower Bengal and Behar and the eastern part of the United Provinces. This is followed by a temporary decline during the height of the hot

weather in May and June, with a mean temperature of over 90° F. The minimum prevalence is in the late cold dry season in January and February. The absence of any sharp rise during the monsoon months in the extreme North-West Frontier of India, in relationship to the nearly entire absence of the rain at that season, is very noteworthy. Further, a study of the yearly curves showed a very regular increase of dysentery accompanying exceptionally heavy rains in each area.

The above data show a remarkably uniform relationship between the monsoon rains and the prevalence of dysentery, which affords no evidence of the probability of any great variations in the type of the disease likely to be met with in the wet and dry areas respectively. Unfortunately, we do not yet accurately know the seasonal distribution of the two main types of dysentery in India, and although so far I have found a considerable majority of the cases met with during the yearly monsoon rise in Calcutta to be amœbic, yet, on the other hand, Bahr recently reported that in the Fiji Islands the main prevalence of the bacillary form was also in the rainy season. We must, therefore, attack the problem from another side.

The Proportion between the Admission-rates for Liver Abscess and Dysentery as an Indication of the Prevalence of Amœbic Dysentery.

The long controversy regarding the relationship, if any, between dysentery and tropical liver abscess may now be taken as definitely settled. In 1902 I published an extensive series of data proving that the presence of dysentery at some time or other, and always in my experience of the amœbic type, could be demonstrated in over 90 per cent. of liver abscess cases in Calcutta, if both a clinical history and a post-mortem examination were available; but that in one-fourth of the cases the bowel ulceration was only found after death, when no history or symptoms of dysentery were available during life, the colitis being latent and usually limited to the cæcum. Since that time I have accumulated abundant further evidence in support of those statements, and have now post-mortem records of over 50 liver abscess cases, in no less than 98 per cent. of which there was evidence of amœbic dysentery, including scars of old ulcers.

Moreover, a study of the more important literature of dysentery during the last century and a half has convinced me that those outbreaks, which were unaccompanied by the occurrence of cases of large single abscess of the liver, were examples of the bacillary disease, including John Pringle's observations on the diseases of the army in Flanders in 1752, William Baly's 1847 Gulstonian lectures on dysentery in the Millbank Prison, Woodward's account of dysentery in the American Civil War, and recent experience in the South African War. On the other hand, the descriptions of the old Anglo-Indian writers, Annesley, Twining, Edmund Parkes, Maclean, and others, who all met with numerous cases of liver abscess, referred mainly to amœbic disease. We may, therefore, safely conclude that if there is a considerable liver abscess admission rate in any given area amœbic dysentery will certainly be widely prevalent, and will probably constitute a large proportion of the dysentery met with in that part of the country.

I have therefore studied the relative proportions of admissions for dysentery and liver abscess respectively in the British army hospitals in India for the ten years 1901–10. The results reveal the very high figure for the whole of India of 1 liver abscess admission to each 7 dysentery ones, which clearly indicates an extensive occurrence of amœbic dysentery in the country as a whole. (Table 1.) Turning next to the rates for different areas, we find a remarkable uniformity in all parts of the country, for with the exception of the first and last areas, in which but few British troops are stationed, the rates only vary from 1 to 5 to 1 to 8, while in the very extensive portion of India ranging from steamy Lower Bengal to the very dry, hot North-West Frontier and also all Central India the proportion of liver abscess to dysentery admissions was practically uniform—namely, from 1 to 6 to 1 to 7. The only possible conclusion from these striking figures is that amœbic dysentery is widely prevalent all over India, while such a very high ratio as 1 liver abscess to every 6 or 7 dysentery admissions cannot be explained, except on the assumption that a large proportion of the dysentery cases in the British army in India are amœbic in nature—a conclusion of far-reaching importance.

TABLE I.—*Proportion of Liver Abscess to Dysentery Admissions in the British Army in Different Parts of India.*

	Ratio of liver abscess to dysentery admissions.			Dysentery case mortality per cent.	
	1901–10.	1905–07.	1908–10.	1905–07.	1908–10.
1. Burma Coast and Bay Islands	1–11	1–8	1–18	9·0	1·6
2. Burma Inland	1–7	1–8	1–3	4·2	5·5
4. Bengal and Orissa	1–6	1–5	1–13	3·1	3·0
5. Behar and Eastern United Provinces	1–6	1–6	1–8	3·6	2·9
6. West United Provinces and East Punjab	1–7	1–4	1–7	3·7	4·4
7. Punjab Frontier	1–6	1–4	1–7	1·1	0·0
8. Central India	1–7	1–5	1–18	4·2	2·2
9. Deccan	1–9	1–6½	1–11	2·8	2·5
10. Western Coast	1–5	1–4	1–9	0·0	0·0
11. Southern India	1–11	1–12	1–15	1·0	0·0
All India	1–7	1–5½	1–8	3·3	2·7

Note.—Division 3, Assam, has no British troops.

On working out the proportion of liver abscess to dysentery cases in the previous decade 1891–1900 the figure obtained was 1 to 14½, or only half the rate of the succeeding ten years. This difference was solely due to the dysentery admission rate having fallen from 29·1 to 14·5, while the liver abscess figure had risen slightly from 2·0 to 2·2 per 1000. The most probable explanation of this marked change is that sanitary improvements have greatly reduced the incidence of bacillary dysentery, caused by the same great group of organisms as typhoid fever, which has also greatly diminished during the same period. If this is the case, then it increases the probability that much of the remaining dysentery is amœbic in nature.

In 1907 I showed[3] that amœbic abscess of the liver is an easily preventable disease, if it is detected by the blood changes in the febrile presuppurative stage and adequately treated with large doses of ipecacuanha. During the following three years the liver abscess mortality in the British army in India fell from a previously stationary rate to only about 30 per cent. of its former prevalence—a saving of nearly 70 lives a year. I have shown in columns 2 and 3 of Table I. the proportion of liver abscess to dysentery admissions during the three years 1905–07, before the introduction of my method, and for the subsequent three years 1908–10. It will be seen that the figures for the different areas show remarkable variations ranging from an increase from 1 to 8 to 1 to 3 in Inland Burma, down to a decrease from 1 to 5 to 1 to 18 in Central India, and nearly as great falls in Bengal and Orissa and in Burma Coast and Bay Islands. Such great differences are in all probability due to the unequal adoption of the new preventive treatment for liver abscess in different station hospitals, but I have been unable to obtain figures of the expenditure of ipecacuanha in the years dealt with, so cannot test this supposition.

In the last two columns of Table I. I have entered the figures of the percentage mortality among the dysentery admissions, an examination of which will show that in 9 out of the 11 areas the dysentery mortality has fallen or risen parallel with the increase or decrease in the ratio of liver abscess to dysentery admissions, and frequently in very much the same proportion, the rise in both in Inland Burma being especially noteworthy. This relationship is most easily explained on the supposition that where ipecacuanha has been most used in the treatment of early amœbic hepatitis, with a consequent marked reduction in the cases of liver abscess, there the same drug has been given more frequently for dysentery, with a reduction in the case mortality of that disease. If this is so, then it would constitute additional evidence of the frequency of the amœbic form of the disease among British soldiers in various parts of India.

The failure of ipecacuanha and the success of the saline treatment of dysentery during the South African war, doubtless due to the cases having been very largely of the bacillary type (as is usual in campaigns in dry and comparatively cool climates), probably led army medical officers to adopt the saline method more extensively in the treatment of dysenteries in British troops in India during the last decade, possibly to the neglect of the ipecacuanha in some amœbic cases. The slight rise in the admission rates for liver abscess, accompanying a fall to one-half of the dysentery rates, might thus be readily accounted for. Now that I have

[3] Practitioner, June, 1907

shown that amœbic dysentery can be rapidly, and, as far as the evidence yet goes, completely and permanently, cured by the emetine treatment, and the subsequent occurrence of amœbic hepatitis and liver abscess rendered very remote or even impossible, the simple and early recognition of amœbic dysentery from the closely simulating bacillary form has become a matter of the most urgent practical importance. The smaller the proportion of amœbic cases the more likely they are to be overlooked and the greater the vigilance required. The full consideration of the very difficult subject of the differentiation of the dysenteries must be reserved for a work I have for some time been engaged on, but the following information may be of help to those who have to treat these cases in tropical or subtropical countries, where amœbic disease is nearly certain to occur.

The Differential Diagnosis of Amœbic Colitis.

I have used the term "colitis" to emphasise the important fact that amœbic infection of the large bowel by no means always produces dysenteric symptoms. Thus, among 45 Calcutta post-mortem examinations on cases in which death was primarily due to amœbic colitis, in no less than 18, or 40 per cent., the clinical diagnosis was not even dysentery, although all but four of them had been over two days in hospital. In four each the diagnosis had been "diarrhœa" or "tubercular diarrhœa," in three "peritonitis," while others had been returned as "intestinal obstruction," "gangrene of the rectum" or even "constipation"—so variable are the symptoms met with in this protean and very fatal disease. Moreover, even when well-marked dysenteric symptoms are present, in a large proportion of cases it is impossible to be certain from clinical signs alone whether the disease is amœbic or bacillary in nature. In very acute amœbic cases the diagnosis may often be made from the presence of very tender sausage-like thickenings of the large bowel felt through the abdominal wall, while marked tenderness, especially if accompanied by thickening of the cæcum, is very suggestive of this type. In milder and more chronic cases these signs are frequently absent, while thickening of the sigmoid occurs commonly in both forms of dysentery. Again, if separate pieces of rosy blood-stained mucus constitute all or nearly all the stool, I have usually found abundant amœbæ, while either thick white pieces of mucus without blood, or small transparent raw white-of-egg-like mucus, intimately mixed with loose fæcal matter, is suggestive of the bacillary disease; but none of these points can be solely relied on in making a diagnosis.

It will thus be clear that much experience and vigilance are necessary to enable the less typical cases of amœbic disease to be detected; and it may be said at once that the routine examination of the stools for amœbæ in all cases of bowel disease in warm climates, including cases of diarrhœa as well as of dysentery, will alone ensure the desired end. In short, the regular use of the microscope is every bit as necessary in bowel complaints as in fevers, or rather more so, as in the latter class of case four-hourly temperature charts will often allow of a correct diagnosis, while naked-eye inspection of stools will but rarely permit of a certain differentiation, and may often be very misleading. Fortunately the search for amœbæ is a simple and rapid procedure if the following methods are adopted.

The Examination of the Evacuations for the Amœba Dysenterica.

In a large majority of amœbic dysentery cases the pathogenic organism is easily and quickly found on examining a drop of the blood-stained mucus thinly spread out under a coverglass with an ordinary high power, such as a 1/6-inch lens. Thus, out of 50 consecutive cases of which I have notes, in 42 per cent. the amœbæ were noted as being "very numerous," which means that they were present in nearly every field of the microscope and were found immediately; in 48 per cent. they were "numerous"—that is, they were found by a search of two or three minutes' duration; in 4 per cent. they were "few" and found after a longer search, and in an equal number they were "very few," and only detected by the special procedure to be described immediately, while in one case they were not seen during three examinations of the stools, although a subsequent post-mortem examination revealed the presence of a very chronic amœbic ulcerative colitis. In four of the above cases the parasites were not found at the first examination, but were numerous in three of them at a second attempt, usually on the following day, and few in the remaining one. It thus appears that in 90 per cent. of the cases the organisms were very readily found after one, or occasionally two examinations, the procedure being far easier and quicker than the hunt for malarial parasites.

Much has been written on the differences between the harmless amœba coli, with its lack of clear ectoplasm, well defined nucleus, and small size; and the pathogenic amœba histolytica, with the opposite characters and frequent inclusion of red corpuscles in its substance. In my experience of examinations of dysenteric stools the former is so rarely met with that from the practical point of view it may be safely neglected, and I agree with Craig in thinking that whenever amœbæ are found in diarrhœal or dysenteric stools they may safely be regarded as pathogenic and their hosts treated accordingly. That this is a safe practical rule will be clear from the simple fact that among 33 consecutive cases of dysentery under my treatment subsequently to my commencing the emetine treatment, in 24 amœbæ were found, and in all of these except two nearly moribund cases the dysenteric symptom completely cleared up within two to four days; while on the other hand in none of the remaining non-amœbic cases did the drug have any material effect on the progress of the disease, although it never appeared to do any harm. The effect of the new treatment, therefore, furnishes a very reliable clinical differentiation between the two types of dysentery, which is by no means the least of its advantages.

A rapid method of detecting amœbæ when present in scanty numbers.—Although as a rule it is very easy to find the amœbæ owing to their numbers, in the exceptional cases in which they are very few the following technique will be of great assistance. French writers in particular have advised the addition of a drop of 1 per cent. watery methylene blue to a piece of dysenteric mucus, as it stains the pus and epithelial cells at once, while for a time the amœbæ resist taking up the stain and also retain their activity. They thus stand out clearly amid their blue surroundings as light refractile motile bodies, and are readily detected even if comparatively few are present. Recently I have found that with a little practice it is possible to detect them in such a preparation examined directly after it is made with a very low power, such as a Zeiss A or a half-inch lens, a higher power being turned on to verify the find. With some practice they may also be seen with the same low power in unstained mucus as small glistening particles, the condensor being fully lowered for this method of examination, and any find being further scrutinised by a 1/6 inch lens. By these means a fair-sized piece of mucus thinly spread under a full-sized coverglass can be completely searched within a very few minutes, while a second piece should be examined before a negative result is recorded, and if necessary the examination repeated on the following day.

It is also important to note that full doses of ipecacuanha or emetine should not be given before the stools are microscopically examined, or a negative result is likely to be obtained in amœbic cases, just as in malaria after quinine has been taken. The stools should also be examined as fresh as possible, preferably within an hour or so of being passed. In Lower Bengal no artificial warmth is necessary, but in colder places the specimen may be kept at blood heat for a short time and the slide warmed. The organisms should always be seen in active motion before a positive diagnosis is made, for there are often large mucoid cells present, especially in bacillary dysentery, which may easily be mistaken for inactive amœbæ by the inexperienced. Staining with the iron-hæmotoxylin method will enable amœbæ as well as their young budding forms to be recognised, but is seldom necessary. Small oval flagellated trichomonads are often seen in addition to amœbæ, and also disappear under ipecacuanha or emetine.

A Comparison of the Ipecacuanha and Emetine Treatments.

I have already recorded some striking cases illustrating the curative action of emetine salts in amœbic dysentery and hepatitis. In the latter condition half-grain doses of the hydrochloride hypodermically once or twice a day very rapidly relieve the acute pain and tenderness and stop the fever, while if suppuration has not yet occurred the leucocytosis also soon disappears and the patient is convalescent. If the increase of the white corpuscles continues there is

probably a collection of pus in the liver. This should now be removed by aspiration and one grain of the soluble emetine salt, dissolved in about one ounce of water, injected into the cavity before the cannula is withdrawn and the puncture sealed with collodion. Subcutaneous emetine injections should be continued for several days to kill any amœbæ remaining in the wall of the abscess or of the large bowel, and if there is no secondary bacterial infection of the abscess, and it is still confined to the liver substance, it will nearly always dry up without further trouble, incision and drainage being usually unnecessary. If the cavity is a very large one the aspiration may have to be repeated, as in an old debilitated subject from whose liver Lieutenant-Colonel A. H. Nott, I.M.S., recently removed 80 and 45 ounces of pus by aspiration at 10 days' intervals, and who recovered perfectly under the emetine treatment just mentioned. There is good reason to hope that the open operation will in future be only exceptionally required in the treatment of amœbic liver abscess, greatly to the comfort of the patient.

In order to allow the precise value of the emetine treatment of amœbic dysentery to be estimated we now require a consecutive series of unselected cases, which can be compared with a similar series treated by the recognised ipecacuanha method. Such data are now available regarding 54 cases under my care in the isolation ward of the Calcutta Medical College Hospital, and the most important facts concerning them are briefly summarised in Table II., which includes 30 consecutive cases treated with ipecacuanha, and 24 in which emetine was used so as to allow of their ready comparison.

TABLE II.—*A Comparison of the Ipecacuanha and Emetine Treatments.*

	Ipecacuanha.		Emetine.
Died from dysentery within 3 days of admission	4 cases.	.....	2 cases.
Died from dysentery over 3 days after admission	7 ,,	.....	—
Died from other disease after cure of dysentery	—	.....	2 cases.
Removed from hospital in very bad condition	2 cases.	.....	—
Left hospital unchanged or not cured	4 ,,	.....	—
Cured	13 ,,	.....	20 cases.
Average days in hospital of cured cases	16·4	.....	7·2
Average days before stools became normal	11·4	.....	2·35
Average grains of ipecacuanha or emetine to that time	406	.....	2·0

Many of the cases in both series were admitted in a very bad condition, a considerable proportion being chronic attacks of from one month to over one year's duration. The cases which died within less than three days of admission are shown separately in the first line of the table, as they came under observation in a practically hopeless condition, so that it will be fairest to omit them in calculating the failures of either form of treatment. On the other hand, the two cases shown as removed from hospital by their friends in a very bad condition should be included as deaths, as there was little or no chance of their recovery. This would leave 9 deaths out of 26 cases, or a mortality of 34·6 per cent. in the ipecacuanha series, against no deaths due to dysentery among the non-moribund cases treated by emetine—a highly satisfactory result. Of the two patients entered as dying from other diseases after cure of the dysentery by emetine, one succumbed to heatstroke several days after, being quite free from bowel trouble, and the other, a dropsical and very anæmic subject, developed cancrum oris, which proved fatal ten days after his dysenteric symptoms had finally developed, both conditions indirectly due to the extreme feebleness of the patients after two and seven months' dysentery respectively. It is also noteworthy that none of the emetine patients left hospital uncured, although 6 of the surviving 19 ipecacuanha series declined to continue the treatment and had to be discharged "otherwise." Once more, the average duration of the ipecacuanha treatment up to the time the blood and mucus finally disappeared from the stools in the recovering patients was 11·4 days, and their total stay in hospital 16·4 days; while under emetine salts the corresponding figures were 7·2 and 2·35 respectively. Lastly, the average amount of ipecacuanha taken before the stools became normal was 406 grains, and further considerable amounts were administered to most of them before their discharge from hospital. On the other hand, the average amount of emetine required for the cure was 2 grains, being equivalent to 180 grains of ipecacuanha, some of them receiving further small doses, so that the new method is also an economical one, especially if the time in hospital is taken into account.

Methods of administration and dosage of emetine salts.—I now always use the hydrochloride of emetine, as it is much more soluble than the hydrobromide, the latter requiring about 2 c.c. of water to dissolve a full dose, and is then liable to become deposited as crystals in the capsules, but is readily redissolved by gentle heat. The hydrochloride can now be obtained from the leading manufacturing chemists either in tabloids suitable for hypodermic use, or already dissolved and sealed in glass ampoules. In adults I now seldom give less than half-grain doses, and prefer two-thirds of a grain, equal to 60 grains of ipecacuanha, twice a day for the first two days in severe cases and then once for another day or two, which is usually sufficient for a cure. Solid food is begun in the form of soft rice and other farinaceous forms on the fourth day, and Indian patients I can seldom induce to stay in hospital over a week unless very debilitated on their arrival.

As the hypodermic method is not always convenient in practice in India I have tried giving one-third of a grain tabloid by the mouth on an empty stomach, and find that two-thirds of a grain can generally be taken without producing any material sickness and with much more favourable results than with ipecacuanha by the mouth, although the action is slower and less effective than by the hypodermic method, and in one patient blood and mucus reappeared in the stools after three days' absence, although he had taken a total of two grains by the mouth, but all symptoms finally vanished after two more days on hypodermic doses. In children of about seven years of age I have found one-third grain doses of emetine subcutaneously are well borne and rapidly effective, even in very chronic cases, while in severe cases in adults I have frequently given a grain at one dose and repeated it in about 12 hours, and have not yet seen any toxic effects.

Does the emetine treatment produce a complete and permanent cure?—I have already recorded two cases in which death took place from multiple abscesses of the liver and gangrene of the cæcum respectively, very shortly after emetine treatment had removed the dysenteric symptoms, in both of which microscopical examinations showed a complete disappearance of the amœbæ from the bowel and liver tissues, although they had been abundant in the stools on admission. The important question remains as to whether a few of the parasites may not survive and subsequently bring about a relapse, just as in malaria, trypanosomiasis, and syphilis respectively, after quinine, atoxyl, and salvarsan treatment. In order to solve this problem I have been endeavouring to follow up my patients after they leave hospital, and have either seen or heard from several of them some weeks after their discharge. The following are the only two cases who have shown any signs of apparent relapse.

CASE 1.—A Mahamedan male, who had been rapidly cured of a very severe attack of amœbic dysentery after ipecacuanha had failed to control it, was readmitted for dysentery three weeks after he had left hospital. I examined the loose fæcal stools and found neither blood, mucus, nor amœbæ present, while his leucocyte count was low, so I felt sure his present illness was not amœbic in nature. He had persistent hiccough, and died in three days, and at a post-mortem examination I found pneumonia at the left base. The large intestine from the cæcum to the transverse colon was much dilated, firmly adherent to surrounding structures, and its wall so thinned that, in spite of the utmost care, it was torn through in several places in removing the gut. On laying it open a remarkable condition was found, for there was no trace of any recent dysenteric lesions, but very extensive smooth-floored healed ulcers of former amœbic disease. Both scrapings and sections showed no amœbæ, but the muscular coat of the bowel had been so extensively destroyed by the former dysentery as to lead to a paralytic dilatation of the large gut. In addition there was a small encysted abscess in the liver about two inches in diameter, with a nearly smooth wall and neither amœbæ nor bacteria.

It is therefore clear that the six half-grain doses of emetine which he had received on his first admission five weeks before his death had completely destroyed the amœbæ in the extensive infection of the large intestine and also in the liver abscess—in short, a complete sterilisation of the tissues had taken place.

CASE 2.—A Hindu male admitted to my ward for chronic relapsing amœbic dysentery was given three one-grain doses of emetine hydrochloride hypodermically, one on each of three successive days, at the end of which time his stools were normal and he left hospital well at the end of a week. He was admitted for dysentery under me four weeks later in a moribund condition and died on the following morning. I examined the first stool passed after his readmission and found mucus, but no amœbæ. A post-mortem examination was

fortunately obtained, and revealed in the upper part of the large intestine a number of transverse scars of recently-healed amœbic ulcers, but no active lesions. The lower half of the gut showed the characteristic lesions of an acute bacillary dysentery, Shiga's organism being obtained on culture, while no amœbæ could be found with the microscope.

These two cases are most instructive, for without necropsies I should have had to regard both as probably relapses of amœbic dysentery, and consequently evidence of the failure of emetine to bring about a complete cure; whereas they now afford the strongest proof that three days of emetine injections can bring about rapid and complete healing of both very acute amœbic lesions, destroying extensive areas of the mucous and muscular coats of the bowel (although not able to restore the destroyed tissues), and also of a very chronic and relapsing form of the disease, and to bring about the encystment of a small liver abscess. Much further experience is needed to furnish absolute proof that the new treatment will always destroy the whole of the pathogenic amœbæ throughout the human body, but all the evidence at present available points to such being actually the case. If this is eventually found to be so it will constitute the most remarkable therapeutic success yet achieved.

Calcutta.

INJURIES TO THE SEMILUNAR CARTILAGES:

A PERSONAL EXPERIENCE OF 449 CASES OF OPERATION.[1]

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DURING the past 10 or 11 years I have been much interested in the subject of injuries to the semilunar cartilages, and, inasmuch as this class of case is extremely common in the northern counties of England, I have had ample opportunity of studying it.

On looking through the notes of both my hospital and private patients I find that, during the period between the end of the year 1900 and the end of the year 1911, I have operated upon 449 cases (413 hospital and 36 private) diagnosed as suffering from injury to the semilunar cartilages. All the patients made good recoveries, and in no case was there any resulting joint infection, or any interference with the after stability of the joint. In a few cases—and this applied particularly to those in which no definite pathology was found at the operation—complaint was made that the symptoms had not been relieved; otherwise the results were all that could be desired.

One of the commonest industries in Northumberland and Durham, if not the commonest, is coal mining, and this industry far outnumbers all the rest in the district in supplying the vast majority of sufferers from this accident. The reason why this is so is not far to seek. The coal-miner, owing to the lowness of the seam at which he is hewing, performs his work with his knees more or less flexed. In this position, owing to relaxation of the internal, posterior and anterior crucial ligaments, a certain amount of rotation and lateral mobility between the upper end of the tibia and the lower end of the femur is permitted; and it therefore follows that if, while the knee is in the flexed position, a forcible twist or wrench takes place—such, for instance, as might happen in throwing coal while in a squatting position, when the body is swung round too far—one or other knee is twisted, and the cartilage may be torn. Where the accident does happen the cartilage, nipped between the condyle of the femur and the upper end of the tibia, is forcibly dragged towards the centre of the joint, and either split more or less in a longitudinal manner, or its free edge torn or frayed.

I have been unable to satisfy myself that there is ever a true detachment, as in every case observed, even where the split is very near the attached margin, a narrow rim of cartilage still retains its normal position. I would here wish to emphasise that where a proper diagnosis has been made the injury is always in the nature of a tear or split, and where such is not found the probability is that a wrong diagnosis has been made, some other structure having been injured, probably the internal lateral ligament. In the present series of cases 95·5 per cent. of them showed definite splits or tears, so that only in 4·5 per cent. was there no definite pathology. These latter, I presume, are what are termed "loose" in the various text-books.

As I have before stated, coal-miners are the most frequent sufferers from torn semilunar cartilage, and in the present series, out of 449 cases 282 occurred in miners while following their employment. This gives a percentage of 62·8.

Football players are also very liable to the accident, and when we remember that in football the running is, as a rule, not straightaway, but consists rather of dodging, twisting, and swerving, one is not altogether surprised. I am also inclined to think that the long leather studs in the boots, fixing the foot in the ground during swerving or dodging, while the body momentum goes on, are often the primary cause. Out of my 449 cases the accident occurred, in the first instance, while playing football 81 times. This gives a percentage of 18. It will be noted, therefore, that the mining occupation and football playing are responsible for 80·8 per cent. of the injury. Other forms of sport supply 2 per cent.

The internal semilunar cartilage is very much more often injured than the external. In the present series of cases the former shows a percentage of 92, while the latter shows a percentage of 8. For a long time I was under the impression that the reason the internal semilunar cartilage was more often torn than the external was the nature of the accident. It seemed to me that an inward twist, where the femur is rotated inwards and separation of the joint surfaces takes place at the inner side, was the factor which would cause tearing of the internal semilunar cartilage. I found, however, that this was not always so, a great many of the patients being positive in asserting that the knee was twisted outwards. I am, therefore, driven to the conclusion that both an inward and an outward twist will cause rupture of the inner cartilage. Perhaps the reason is to be found in the anatomical conditions. We know that while the internal semilunar cartilage has a close connexion with the capsule and internal lateral ligament, the attachment of the external semilunar cartilage to the capsule is looser, and it has no connexion with the external lateral ligament. Under these conditions, supposing the external semilunar cartilage was nipped between the external condyle and the upper surface of the external tuberosity of the tibia, and thrust towards the centre of the joint, and bearing in mind the limited lateral excursion of the femur which would be permitted, a tear of the cartilage would not be likely to take place, but rather, in the majority of cases, at the most, stretching of its connexions. On the other hand, if the internal cartilage be nipped between the internal condyle and inner tuberosity of the tibia, and dragged towards the centre of the joint, considering its much closer connexion, a split or tear would often result.

The right knee is slightly more frequently affected than the left, the percentage of the one being 53·3 and of the other 46·7. In the case of six patients both internal cartilages were removed, in one case at the same operation, and in the others with an interval of from six weeks to five and a half years. In one patient both external cartilages were removed with an interval of one year. In two cases, in both of which the internal semilunar cartilage was diagnosed as torn, on operation these were found normal. An incision

List of Special Cases.

No. 49	...	...	...	Both internal cartilages removed at same operation.								
Nos. 86	and	361	...	,,	,,	,,	,,	5½ years' interval.				
,, 123	,,	146	...	,,	,,	,,	,,	9 months'	,,			
,, 210	,,	366	...	,,	,,	,,	,,	2 years'	,,			
,, 374	,,	449	...	,,	,,	,,	,,	9 months'	,,			
,, 424	,,	438	...	,,	,,	,,	,,	6 weeks'	,,			
,, 62	,,	70	...	,, external	,,	,,	1 year's	,,				
,, 22	,,	343	...	,, cartilages in one knee	,,	at same operation.						
,, 113	,,	266	...	,,	,,	,,	,,	,,	,, with interval of 3 yrs.			
,, 184	,,	195	...	,,	,,	,,	,,	,,	,,	,,	,,	,, 8 mos.
,, 291	,,	346	...	,,	,,	,,	,,	,,	,,	,,	,,	,, 11 ,,
,, 110	,,	142	...	Same cartilage operated upon twice.								
No. 196	...	...	Patient developed gangrenous appendicitis after 1st Op.									
,, 428	...	...	,,	,,	acute lobar pneumonia	,,	,,					
,, —	...	...	,,	,,	whitlow.							

[1] A paper read before the Surgical Section of the Royal Society of Medicine on Oct. 8th, 1912.

was therefore made on the outer side of the joint, and the external cartilages, much torn and mutilated, were removed. These two cases show that sometimes it is impossible to diagnose whether, in the case of an injured knee, the internal or the external semilunar cartilage is at fault. In three cases from the same knee both semilunar cartilages were removed, in the first with three years', in the second with eight months', and in the third with 11 months' interval between the operations. In two cases where, after operation for injury to the internal semilunar cartilage, the symptoms were not relieved the joint was again opened. The portion of cartilage left behind after the previous operation was found to be torn and so was removed with complete relief of symptoms.

Many types of torn semilunar cartilage are met with, and examples of these I will show you. In the first place there is the simple longitudinal split, varying as regards its position to its attached border, being sometimes quite close to this and sometimes quite near to the free edge. When the accident is recent the edges of the tear show roughness and are often blood-stained, while the joint cavity itself contains blood-stained synovial fluid. Where the primary accident occurred some weeks or months previously the edges of the split are rounded and smooth, and in some cases at the ends of the split some cicatrisation may be noticed. The split does not extend straight through the substance of the cartilage, but rather in an oblique manner from near its circumferential attachment downwards and towards the centre of the joint, so that on the upper surface of the cartilage the tear is near the outer circumference; on the under surface it shows nearer the free edge.

In some cases, on opening the joint the detached portion is seen lying in its normal position, and if a careful search be not made it might easily be overlooked. Again, in other joints the detached piece will be found curled up between the condyles, and practically only attached by its anterior and posterior ends. Sometimes the split is in the posterior part, and cannot be demonstrated until the anterior attachment of the semilunar cartilage is divided and strongly pulled upon, when the detached portion snaps forward. In one case, after a long search I found the detached portion lying stretched round the condyle.

In another type the tear extends from some point in the free border, across the breadth of the cartilage for a variable distance, and then either forwards or backwards. In the former case the detached portion may form a pedunculated piece, which, previous to operation, may be felt moving in front of the internal condyle. In another type the free border is the part that has been torn, forming a small pedunculated disc with rounded edges, and in some of these showing where it hinges over the free margin of the still attached cartilage. This pedunculated disc may form one of the varieties of loose bodies, in consequence of becoming completely separated as a result of being frequently ground between the joint surfaces. In still another type there is a more or less horizontal split through the thickness of the cartilage, the undermost piece being liable to engage between the joint surfaces and so cause symptoms. This type may be combined with the simple longitudinal split. In a minority of cases the injured cartilage is mutilated beyond all recognition.

The bulk of the sufferers from torn semilunar cartilage give a very typical history, and I would here emphasise that in the majority of cases we have to diagnose the condition from what we are told. It may be that when you first see the patient the primary tear occurred months or years previously, and the subsequent attacks of "something going wrong with the joint" have been comparatively slight, consisting, perhaps, of little more than experiencing a click or a snap at the inner side of the knee with pain in the same situation. He then finds that momentarily the joint locks—i.e., he is unable to extend it completely; then suddenly, after moving his knee himself or somebody moving it for him, another click or snap is experienced, and full power of movement is again regained. Attacks such as these occur more or less frequently and at various intervals after the primary tear, and are often followed by no effusion, the only symptom remaining being a tender point at the inner or outer side of the patella somewhere in the line of the articulation, according as it is the internal or external cartilage that is injured. These subsequent attacks are often determined by very slight causes, such as catching the bed-clothes with the toes, stepping on irregular ground, or rising from the squatting position. When, however, they do occur they render the limb perfectly helpless for a time and may happen at very awkward moments, as, for example, when crossing in front of a tram or motor-car. One of my patients sustained a severe punctured wound of his palm in consequence of spiking his hand on some iron rails which he had attempted to grasp in order to prevent himself falling.

When the primary tear takes place the symptoms are much more severe, and are often as follows. In consequence of a severe wrench or twist the patient is suddenly seized with severe pain. The pain is at first often felt over the whole joint, later becoming localised at the inner or outer side, and is frequently so bad as to cause faintness and vomiting. At the same time a click or snap is felt, or a feeling of something slipping. If running, he falls to the ground, and finds he is unable to completely extend the knee. Often some witness of the accident at once practises flexion and extension movements, another click or slip is felt, and the joint is then found to be capable of complete extension. In a few hours swelling occurs, the result of effusion in the joint, and this, in consequence of rest, disappears in the course of two or three weeks. In some cases the inability to extend persists for a week or more, and in others only disappears when an anæsthetic is given and certain manipulative procedures carried out or the offending cartilage is removed. For some weeks after the accident, and after all swelling has disappeared, a tender point persists at the inner or outer side of the patella according as the internal or external cartilage has been torn.

In deciding upon a line of treatment the question arises as to whether it is necessary for the patient to have a perfectly sound joint or not. If he is engaged in manual labour the answer must be in the affirmative, and in the absence of any contra-indication, such as intercurrent disease, operation is demanded. This decision must also apply to active men and women who are still wishful to spend their leisure in open-air sports such as football, cricket, hockey, shooting, and riding. I am aware, of course, that in some of these cases the application of a knee splint, which, while permitting flexion and extension, prevents rotary and lateral movements, may prevent the joint "going wrong," but for such a splint to be really effective it must be somewhat heavy and cumbrous, and this the patients will not wear as a rule, or at any rate discard it after using it for a short time. I am afraid I am very sceptical as regards the result of treatment by prolonged rest, in the case of a primary tear, bringing about a cure, in view of the conditions found in operated cases.

Where the inability to completely extend the joint persists operation is certainly demanded. Even where it is hoped that reduction under an anæsthetic may occur, this procedure should not be attempted unless the joint has been thoroughly prepared, so that in the event of failure open operation may be performed. If operation be decided upon, the question next arises as to which is the best time to operate. Personally, I see no objection against doing this after the first week or 10 days following the primary accident. I choose this time because I judge the devitalising effect of the trauma will by then have passed away and attempts at repair have started. Where operation is decided upon in consequence of repeated attacks of locking, it does not matter when the operation is performed (although personally I again prefer to wait until a week or 10 days has passed), as the effects of the last attack will probably be so slight as not to lower the joint resistance.

Previous to and during operation the most rigid antiseptic precautions are called for. For 36 hours I keep the patient in bed, and at the beginning of this period the skin of the thigh and leg is shaved, thoroughly washed with spirit soap and water, then with turpentine, and finally with methylated spirit. A compress wrung out of 1 in 1000 perchloride of mercury solution is then applied around the limb, extending from the middle of the thigh to the middle of the leg. This is covered with mackintosh and secured by a bandage. The same procedure is carried out 24 hours later, and then, when the patient is on the operating table, and after a tourniquet is applied round the thigh, the knee is strongly flexed and kept in this position by my assistant. Before making the incision the operation area is thorougly washed with a solution of 1 in 20 carbolic acid.

The incision I use is a transverse one, extending, in the

case of the internal cartilage, from the inner border of the patellar tendon, backwards for about two inches in the line of the articulation. This incision, I consider, gives the best exposure, and if the internal lateral ligament be not cut across there is no interference with the after stability of the joint. After the skin is divided a strong aponeurosis is exposed, and is also divided in the length of the incision. The capsule with underlying synovial membrane is then opened, and the interior of the joint exposed. Then, in the great majority of cases, the tear or split will be quickly recognised, especially where it involves the anterior part of the cartilage or where there is marked displacement of the torn portion. If after careful scrutiny nothing pathological is discovered, I divide the anterior attachment of the semilunar cartilage, seize it with strong-toothed forceps, and drag it forwards. If there be a posterior split the detached portion will suddenly snap forwards between the condyles and tuberosity. This snapping forwards is what actually happens during an attack, and if witnessed it can be readily appreciated what a shock it will be to the patient. In every case I remove not only the detached piece, but endeavour to ablate the portion still retaining its normal attachment, and since doing this have had no patient returning with recurrence of symptoms. After the cartilage is removed the capsule and synovial membrane are sutured in one layer with catgut. The aponeurosis is similarly dealt with, and the skin incision is closed with a subcuticular suture of silkworm gut. An antiseptic dressing is then applied, with a thick layer of wood-wool wadding, and secured by a domette bandage firmly applied. No splint is used, and the patient is told to commence to move his knee as soon as he can.

After the operation a rise in temperature for the first two nights to 99° or 100° F. is commonly met with, but this need cause no alarm. Again, for the first 48 hours a great deal of pain may be complained of, necessitating one or two hypodermic injections of morphia. Otherwise the convalescence of the patient is perfectly straightforward, and at the end of a week the subcuticular suture is removed. After this is done a light dry dressing is applied, and my infirmary patients are discharged as a rule on the tenth day, being then able to carry out full movements of the joint. In the case of one patient convalescence was disturbed by an attack of acute gangrenous appendicitis, for which operation was promptly performed 11 days after the cartilage had been removed, with a successful result. Another was seized with acute lobar pneumonia (pneumococcal), but made a good recovery; while a third contracted a whitlow a few days following his operation, but this did not in any way affect his recovery.

As regards the after-history of my patients I can only say that I have seen them at periods varying from seven years to a few weeks after their operation, and, except in a very few instances, they have been quite satisfied and have told me that the joint was as strong as ever. In part proof of this I would refer you to the cases in which after the semilunar cartilage in one knee has been removed, the patients have returned to have a torn cartilage removed from the other, or in one or two cases the other cartilage of the same knee. They would not have done this if the first operation had not been successful. Again, where I have operated in the case of both amateur and professional football players, they have all played again, and many of them are still playing. One Monday morning, a week or two ago, I noticed in the column of the *Daily Telegraph* devoted to the account of Association matches played the previous Saturday, that a player in an important Second League match, from whose left knee I removed both semilunar cartilages at the same operation on March 16th, 1910, had not only played well, but scored the only goal of the match.

Where a man is engaged in manual labour I allow him to return to work in 10 or 12 weeks after the operation, but in many cases—and this, of course, applies to sufferers who have sustained the accident at football (other than professional), and so are not entitled to workmen's compensation—they have returned to work as early as six or seven weeks after, and with no bad result.

I am afraid my remarks and conclusions have been, perhaps, based too much on personal experience, but inasmuch as so little has been authoritatively written about injuries to the semilunar cartilages in text-books and elsewhere, this was unavoidable. I trust my small contribution to the subject may be of some value, and would add, in conclusion, that I have always thought these accidents, which claim as their victims a goodly number of those engaged in the important industry of coal mining, have not received the attention they deserved.

Newcastle-on-Tyne.

ON THE CHANGES INDUCED IN BLOOD BY FEEDING: A STUDY IN CELLULAR PHYSIOLOGY.

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(WITH COLOURED PLATE.)

THE experiments detailed below were undertaken with the view of ascertaining whether feeding would produce changes in the blood which could be demonstrated microscopically, apart from the increase in number of white blood corpuscles which we know to occur.

Lily Huie,[1] working in Edinburgh and Oxford under Mann's direction, was able to show marked changes in the nuclei of the gland cells of the insectivorous plant Drosera after feeding the same with egg albumin, albumoses, peptones, &c. The rapidity with which the nuclear changes could be produced depended on the amount of predigestion of the protein food substances. Subsequently, H. G. Butterfield, working with Mann in Oxford, succeeded in demonstrating that if newts are starved in the summer time for a fortnight, and if each newt is fed with a worm of the size of a wooden match, all the nuclei of the most diverse animal tissues, excepting only the nuclei of the nerve cells, would stain much more deeply in the fed newts than in the control animals.

In the present instance blood was chosen for the subject of inquiry to ascertain whether metabolism in the nucleated blood cells during the ingestion of food is likewise accompanied by a definite increase in the nucleo-proteins. Secondly, to determine, if possible, the function of the granules in both leucocytes and lymphocytes. Thirdly, to see whether the increased alkalinity of the blood during gastric digestion would show itself by an increased affinity for free acid dyes, as in Mylius's reaction. And fourthly, to reinvestigate the problem whether a deposit of stored material, such as glycogen or fat, occurs in the blood cells or platelets after a liberal meal.

Our experiments were made on men and frogs. We started our investigation on six medical students, who volunteered to act as subjects, and the following procedure was adopted. After eating the usual breakfast, which included at least two eggs and one glass of milk, no food of any kind and no liquid, except water, was ingested until noon of the next day; thus the men fasted for about 30 hours. Immediately before the breakfast, and after breakfast at two-hour intervals, each student made four blood films, except from 12 o'clock midnight until 8 A.M. the following morning. The last blood films were made two, four, six, and eight hours following the first meal after the fast.

The films were air-dried, wrapped in tissue paper, marked, and turned in to us at the end of the period. The slides on which the students made the blood films were cleaned by us to remove all traces of sodium silicate, because the alkalinity of the latter would have interfered with the Mylius-Ehrlich reaction.[2] The slides were placed in Mann's cleaning fluid of chromic and sulphuric acids[2] for two to four hours, rinsed in several changes of distilled water, and finally rinsed again, one at a time, in distilled water, dried with tissue paper, and wrapped in packets of four, care being taken to avoid touching the surface of the slides.

[1] Huie, Lily: Changes in the Cell Organs of Drosera Rotundifolia, produced by Feeding with Egg Albumin, Quarterly Journal of Microscopical Sciences, vol. xxxix., N.S. (1896-97). Further Study of Cytological Changes produced in Drosera, ibid., vol. xlii. (1899).

[2] Consult Mann's Physiological Histology, Clarendon Press, 1902.

The films were stained in a modified Giemsa stain, Ehrlich's triacid mixture, and Mann's acid hæmatein and Mann's methylblue-eosin. The methylene-azur of "Giemsa's" stain was prepared by us according to Borrel's silver oxide method or by short treatment with 2 per cent. NaOH, the latter being neutralised equimolecularly with centinormal hydrochloric acid and then extracted with chloroform.[3] The films were fixed either by heat or by Gulland's method. We found that Ehrlich's triacid mixture stained best after the films had been placed for one hour on a xylol bath, kept at its boiling point. For the other staining methods ("Giemsa's" and Mann's) the films were fixed for exactly one minute in Gulland's fixative (90 per cent. absolute ethyl alcohol, 10 per cent. formalin), rinsed in absolute alcohol, and dried by blotting with toilet paper. It must be remembered[4] that formaldehyde converts tissues into acid methylene-compounds, and for this reason the affinity for acid dyes is diminished, while that for basic dyes is increased.

The following procedures were adopted in staining :—

I. Fixed by Gulland's method. Stained in Mann's acid hæmatein—30 min. Rinsed in distilled water. Stained in Mann's methylblue-eosin—15 min. Rinsed in distilled water. Blotted with toilet paper. Examined in oil.

II. Fixed by Gulland's method. Stained in "Giemsa's" stain—12 hours. Rinsed in distilled water. Blotted with toilet paper. Examined in oil.

III. Fixed by heat on xylol bath for 1 hour. Stained in Ehrlich's triacid mixture—15 min. Rinsed in distilled water. Blotted with toilet paper. Examined in oil.

In order to give all the films uniform treatment they were kept for 10 days, to equalise the time factor between the films made at the beginning and at the end of the experiment. The slides with the films to be fixed and to be stained by a given method were then fastened together in slide-holders, were placed into and removed from the fixing bath and the stain at the same time, and were then carried through the various rinsing baths in a like manner. In short, all films received as nearly the same treatment as possible, as regards both fixation and staining.

The films were studied with the view of noting changes in the plasma, in the red cells, and in the white cells.

Plasma and Red Cells.

The Mylius-Ehrlich test showed a definite increase in the alkalinity of the plasma during gastric digestion. The changes could first be detected in the films made four hours after the meal and were present until the eighth hour, the maximum being reached at about the sixth hour.

Changes in the viscosity of the plasma and alterations in surface tension of the red cells were carefully looked for, but the difficulties encountered were so great that we think it best not to make definite statements concerning them at this time.

White Cells.

In making comparisons between "control" and "fed" films due attention was paid to the fact that in fasting cells the resistance to pressure is less, and that therefore they are apt to be spread out more, in consequence of which they will present a paler appearance when examined under the microscope.

A. *Lymphocytes in man.*—Compare Figs. 1, *d*, *e*, *f*, *g*, with Figs. 2, *f*, *g*, *h*, *i*, *k*, and Figs. 3, *g*, *h*, *i*, *k*, *l*, *m*, *n*, with Figs. 4, *h*, *i*, *k*, *l*, *m*, *n*, *o*. Figs. 1 and 3 represent the appearance met with in fasting films, and Figs. 2 and 4 those seen during full digestion. Figs. 1 and 2 represent films from one of the students, while Figs. 3 and 4 represent those of Mann.

The cells in the films made during full digestion are smaller than those in the control films. The decrease in size of the cell seems to be due almost entirely to a narrowing of the rim of cytoplasm surrounding the nucleus, the nucleus itself being but little affected, if any. By all three staining methods the films made during the periods of digestion and of fast showed marked differences in the staining intensity of both the nucleus and the cytoplasm.

These changes were best shown after "Giemsa's" stain. In the "fasting" films, stained by this method, the rim of the cytoplasm around the nucleus was wider and paler than in the films made during the digestion period. The cytoplasm, although pale, was more deeply stained than the nucleus. The films made four hours after the meal were the earliest to show a definite change. In these the average width of the rim of cytoplasm was less than in the control or fasting and two-hour films, and both the cytoplasm and nucleus were stained somewhat more deeply. This was more marked in the six-hour films, and the maximum was reached at the eighth and tenth hours. In these films nearly all the lymphocytes were small, with their nuclei and cytoplasm very deeply stained, the rim of the cytoplasm being very narrow and difficult to distinguish from the nuclei. An occasional lymphocyte could be found which was somewhat larger and less deeply stained than the rest, but none was as large and pale as the average cell in the control films. After the twelfth hour the differences in the films became less noticeable.

Most of the nuclei of the lymphocytes, stained by "Giemsa's" method, show particularly during the fasting condition, round, sometimes oval, vacuoles with sharply defined surfaces, which latter in mid-focus appear as rings. The boundaries of the vacuoles stain more deeply than does the rest of the nucleus, and in the surface membrane, bounding the vacuole, minute granules may frequently be seen. There is usually one vacuole in each nucleus, but occasionally two vacuoles are met with. The vacuoles are best seen in lymphocytes having very pale nuclei, when they appear as dark "rings." Stained by other methods than the Giemsa stain prepared by us the vacuoles can be seen, but are not distinct, and in "Giemsa" preparations, kept unmounted for a couple of months, the vacuoles are also difficult to see because of the fading of the surface membrane.

Leucocytes in man.—1. *Neutrophiles.*—Compare Figs. 1, *a*, *b*, with Figs. 2, *a*, *b*, *c*, and Figs. 3, *a*, *b*, *c*, *d*, with Figs. 4, *a*, *b*, *c*, *d*, *e*. The diminution in size during the digestion period can also be seen in these cells, but is not as marked as in the case of the lymphocytes. The neutrophile granules are larger and more abundant in the control films as shown by the triacid and "Giemsa" stains.[5] In the films made during the height of digestion—i.e., about the eighth hour—there is a distinct, though not very marked, diminution both in the size and in the number of granules. The granules are more numerous at the periphery of the cells, leaving a clear zone around the nucleus. Occasionally a cell is seen in which the granules are arranged in chains radiating from the nucleus like the spokes in a wheel. Cells may often be seen in which the granules at the periphery are confluent. The increase in the staining intensity of the nuclei is so marked that one can tell at a glance whether any given preparation was made during the starvation or the digestion period. In these films made during the digestion period the nuclei stain much more deeply, the maximum being reached at the eighth and tenth hours. At this time the films stained with Giemsa's stain showed diffuse purplish-red areas in the nuclei of some of the neutrophiles and lymphocytes.

In the Giemsa preparations there are also a number of polymorphonuclear leucocytes containing large granules, which stain red with a slight tinge of purple. Some of them are very large and some very small, there being no uniformity in size.[6] These granules are unstained in both the triacid and hæmatoxylin methylblue-eosin preparations. They are most numerous in the tenth-hour films and are very scarce in the control films.

These granules have not been previously described, and probably are stained metachromatically by the methylene-azur; they either represent a stage in the formation of the neutrophile granules, which is not likely, or they represent a special intracellular enzyme, or, probably, the formation of the sol-phase[7] in the cytoplasm, with which we mean that part of the cytoplasm in which finally the neutrophile granules are imbedded.

2. *Eosinophiles.*—Compare Fig. 1, *e*, with Figs. 2, *d*, *e*, and Figs. 3, *e*, *f*, with Figs. 4, *f*, *g*. The diminution in size and number of the granules is quite as well marked as in the neutrophiles. The nuclei show the same increase in staining intensity during the digestion period as do the nuclei of the neutrophiles and the lymphocytes, but on the

[3] Since the completion of this paper a very important article on the Romanowsky staining of blood cells, by S. G. Scott, T. O. Thompson, and J. L. Hydrick, has appeared in Folia Hæmatologica, No. 12, p. 302 (1911). The data given in this paper will help us in further investigations.

[4] See Mann's Physiological Histology.

[5] The peculiar staining of the neutrophile granules by our Giemsa stain is probably due to the fixation of the films by Gulland's method.

[6] Ibid.

[7] Consult Mann's Physiological Histology, pp. 29-38.

whole they are paler than the nuclei of the other white cells.

3. *Mast cells.*—A sufficient number for study could not be found.

The change in the blood pictures, as far as the depth of staining of the nuclei is concerned, is shown in the accompanying chart (1), which was picked out at random from a large number of similar charts. On comparing the very pale

CHART 1.

—	Very pale.	Pale.	Medium.	Dark.	Very pale.	Pale.	Medium.	Dark.	Very pale.	Pale.	Medium.	Dark.
	Control (just before breakfast).				2 hours after breakfast.				4 hours.			
Polymorpho-nuclear leucocytes.	4	8	8	1	8	5	12	8	5	8	6	1
Eosinophiles.	—	—	—	—	—	—	—	—	—	—	—	—
Small lympho-cytes.	—	6	4	1	4	14	3	1	1	3	4	6
Large lympho-cytes.	1	4	—	—	1	1	1	—	—	2	—	—
	6 hours.				8 hours.				10 hours.			
Polymorphs.	4	5	8	16	—	3	8	8	8	1	4	4
Eosinophiles.	—	—	—	—	—	—	2	—	1	4	2	—
Small lympho-cytes.	2	4	1	8	—	—	4	7	4	9	4	5
Large lympho-cytes.	1	1	2	—	—	—	1	—	3	3	—	—
	12 hours.				14 hours.				16 hours.			
Polymorphs.	1	5	6	4	—	5	9	—	1	10	7	1
Eosinophiles.	—	1	—	—	—	2	—	—	1	1	—	—
Small lympho-cytes.	—	1	4	11	2	5	3	4	1	4	3	4
Large lympho-cytes.	—	1	1	1	—	2	—	—	1	4	—	—
	24 hours.				26 hours.				28 hours.			
Polymorphs.	3	—	12	6	—	4	7	—	10	6	10	—
Eosinophiles.	—	—	—	—	—	1	1	—	—	3	1	—
Small lympho-cytes.	3	2	4	4	—	8	4	—	2	7	5	1
Large lympho-cytes.	4	1	—	—	—	2	—	—	—	1	—	—

and pale with the medium dark and very dark polymorphonuclear leucocytes, and similarly the pale with the dark small lymphocytes, it will be seen that feeding produces a marked increase in the dark corpuscles. By adding the very pale, the pale, and the medium dark corpuscles together and comparing them with the very dark ones, the following table is obtained :—

CHART 2.

Hours.	Just before breakfast or control.	After breakfast.										4–5 hours after first meal following fast.
		2	4	6	8	10	12	14	16	24	26	28	
Polymorphs { very pale, pale, medium dark }	20	25	19	17	11	13	12	14	18	15	11	26	4
,, very dark	1	8	1	16	8	4	4	0	1	6	0	0	18
Lymphocytes, pale	10	21	8	7	4	17	5	10	8	9	12	14	1
,, dark	1	1	6	8	7	5	11	4	4	4	0	1	11

The last column gives the figures 4½ hours after the first meal following the 30-hour fast, and is especially interesting, for while after 26 and 28 hours' fast the dark leucocytes are to the pale in the ratio of 0 : 11 and 0 : 26, after having taken food 4½ hours previously the ratio becomes as 4·5 : 1. If it were not for the fact that some corpuscles begin feeding later and therefore pass later into the active dark state, the change would be even more marked.

It will be seen that the maximum change in the conversion of pale into dark leucocytes and lymphocytes occurs 6 to 8 hours after breakfast; Chart I. shows absence of very pale lymphocytes and leucocytes during the eighth hour.

Experiments with Sodium Caseinogenate containing 5 per cent. Sodium Glycerophosphate.

Since previous experiments have shown that nuclear changes are produced under normal conditions only by protein foods, and not by carbohydrates or fats,[8] we decided on choosing a very concentrated purin-free protein food, such as caseinogen. As further pure caseinogen, prepared by Hammarsten's method, is very indigestible, while its alkali salts are easily digested, we thought of giving the combination of sodium caseinogenate (95 per cent.) and glycerophosphate (5 per cent.), sold commercially under the name of sanatogen, a trial. This preparation was recommended some years ago to Mann after an attack of influenza, by Dr. Meredith Young, who had employed it in typhoid. As the beneficial results of this preparation were much doubted by one of our foremost colleagues, who at that time was at the Tulane University, we decided to put its food value to experimental test.

A hundred frogs, which had not been fed during the winter months, were starved for one additional week and, apart from six frogs used as controls, each one was given about one gramme of sanatogen made into a thick paste with water. The frogs were killed at 10-minute intervals during the first hour, then at intervals of one hour for 30 hours, and at 6-hour intervals up to 96 hours. The idea of giving such a relatively large amount of sanatogen to the frogs was to see how the blood would behave in the presence of an excessive amount of protein food. At the proper time each frog was pithed, the thorax opened, and blood films made by rubbing the excised heart over the slides. The films were quickly dried under an electric fan. All the organs were removed as quickly as possible and placed at once in Mann's picro-corrosive-formaldehyde fluid, sectioned, and stained. The results of the study of these tissues will appear in an early paper.

The slides on which the blood films were made were treated in the manner above described for the human blood films, and the films were treated in the same manner throughout as were the human blood films. In addition to the experiments on frogs, Mann experimented on himself. He starved for 20 hours, then took 15 grammes of sanatogen in a breakfast-cupful of water.

The most notable change in his own blood films after feeding on sanatogen is the marked increase in nuclear metabolism, which is very evident even after staining in hæmatein-eosin. (See Figs. 3 and 4.) The changes in the granules of the polymorphonuclear leucocytes and in the eosinophiles were much less marked than in the specimens supplied by the students, and the diminution in the size of the white cells was so insignificant as to be hardly noticeable, but the great change induced in the general appearance of the nuclei of the pale lymphocytes of all sizes is shown by comparing Figs. 3, *g* to *n*, with Figs. 4, *h* to *o*. The great differences in the ratio of the dark, the medium, and the pale nuclei of the leucocytes and lymphocytes in the sanatogen experiment made on Mann are shown in the following table :—

The dark, to the medium, to the pale polymorphs after 20 hours' fasting were as 1 : 33 : 17.
While 7 hours after taking the sanatogen the ratio was 12 : 6 : 1.
Similarly the small lymphocytes after 18 hours' fast were 1 : 4·6 : 1·4.
After 7 hours' sanatogen 25 : 42 : 1.

Changes in the frog after feeding on sanatogen.—White blood cells.—The changes in the white blood cells of the frogs correspond so closely with those found in man that they will not be described in detail. The decrease in size and number of eosinophile granules was especially well marked. (See description of Fig. 5, as also the "red granules" in the polymorphs, Fig. 5, *i* and *h*.) In the 2-, 4-, 6-, and 36-hour films an occasional white cell undergoing mitotic division could be found, while the mitoses during

[8] Attention must be drawn to an exception to this rule, for E. Wace Carlier has shown that marked nuclear changes occur in the liver of rats after feeding them on carbohydrates and fats (see E. Wace Carlier's paper Concerning the Secretion of Ferments by the Liver Cells and some of the Changes observable in them during Digestion, La Cellule, 1905, tome xxii., 2nd fascicule, p. 431). We must bear in mind, however, that the liver acts as a storehouse for both these food substances, and that its increased nuclear activity in all probability is connected with the production of definite ferments for the conversion of dextrose into glycogen, &c.

the 18th hour in all lymphocytes were very numerous and frequent in the leucocytes. During the early period of digestion, especially after 6 hours, amitotic division (see Fig. 6) was common.

Red blood cells.—The first noticeable feature is an increase in size of these cells, together with an increased affinity for both acid and basic dyes, during the digestion period. Both the nuclei and the cytoplasm appear somewhat swollen and stain more deeply. This becomes first evident in the cytoplasm, and as early as the sixth and eighth hour. Marked nuclear changes, however, are not noticeable until the twelfth hour, at which time the nuclei are distinctly larger and more reticular than in the control. There is little further change until the 21st to the 23rd hour. At this time the nuclei are still larger and the chromatin still less dense, although staining more deeply, and the cytoplasm somewhat paler than in the preceding hours. The maximum is reached at the 24th hour. In the 24-hour films are large numbers of cells undergoing division, as all stages can be found. (See Fig. 6.) While the majority of the cells show evidence of nuclear activity, more or less marked, there are still some in (or maybe have reverted to) the resting condition. After the 24th hour these changes decrease, and by the 36th hour practically all the cells are in the resting condition, and remain so until the 54th hour. At this time the cells show nuclear activity and present an appearance similar to the films made at the 22nd and 23rd hours. The changes are still evident in the 60- and 66-hour films, but are less marked. while the resting condition is reached by the 72nd hour, The 8-hour films again show nuclear activity, although less marked than in the 54-hour films. It would, therefore, appear that the feeding of the red cells has a certain periodicity of from 24 to 36 hours.

Sanatogen further stimulates blood cells to undergo nuclear division, which during the early period is mostly amitotic (see Fig. 6 and the accompanying figures, 1–9), while later, at the 24th hour, mitotic division figures are present (Fig. 7). The division figures are well brought out by the hæmatein and methylblue-eosin stain. They were seen with more difficulty in the "Giemsa" preparations and in the triacid films, while the mitotic division of the white cells was best brought out by the triacid mixture. Therefore it is evident that sanatogen acts as a strong stimulus as far as the recuperative powers of the blood are concerned. How it behaves towards other tissues, as already pointed out, will be shown later. Whether this stimulative action depends upon the administration of a rich protein food—viz., caseinogen—or whether upon glycerophoric acid, or on the fortunate combination of these two radicals, is a question which we soon hope to be able to answer definitely.

Summary.

The principal points for consideration are: during the digestion period there is a marked increase in the staining intensity of all nuclei; the rim of cytoplasm in the lymphocytes becomes narrower; the granules in the leucocytes decrease both in size and in number; and the leucocytes may also show a diminution in size.

As far as the deeper staining of the nuclei is concerned two explanations suggest themselves. We may assume, since there is an actual increase in the number of white cells after a meal, that these new cells in the circulation, being younger, are therefore smaller, and that for the same reason they stain more deeply. Analogously younger leucocytes might contain fewer and smaller granules. This explanation of the change in the microscopic appearance of the blood does not seem to us to be the correct one, as we would have to assume either a vast increase in the number of new cells or a correspondingly large destruction of those white cells, which were circulating in the blood before food was taken, to produce the great changes we have found to occur.

The second explanation is based on the fact that the nucleated corpuscles in the blood must get nourishment from the blood plasma and must metabolise as long as they are alive. One would further expect the nucleated corpuscles to be feeding at such times when the blood plasma contains the most food material—that is, while food is being absorbed from the alimentary canal. As Mann and his pupils have previously established, for both plants and animals, the fact that absorption of protein food materials always produces an increase in the stainability of the nucleus, and as the latter depends on an increase in the nucleo-protein content, as proved microchemically by the iron reaction, it follows that the greater affinity for basic dyes shown by the blood corpuscles of animals, while in the act of absorbing food, must come under the same heading as the changes observed in other nucleated cells. We have thus definite evidence that the metabolism of all nucleated cells is inseparable from the increase in the nucleo-protein radical in that cell, and we have therefore before us the problem of the manufacture of purin substances from non-purin radicals.

It is more difficult to account for the diminution in the size of the neutrophile corpuscles. We suggest the explanation that the irritability and the contractility of the white corpuscles are increased in feeding, in consequence of which fed cells are more likely to become spherical and less likely to be spread out by the pressure of the glass slide used in making a film; and further, that the increased osmotic pressure in the blood plasma during the absorption of food may cause a certain amount of exosmosis, and hence shrinkage of the white cells apart from the diminution caused by the partial disappearance of the zymogen granules.

The granules in the leucocytes may be supposed to be either stored food material or zymogen granules, as Ehrlich first pointed out in his "Farbenanalytischen Untersuchungen." If food material, they should be used up during starvation, while if zymogen granules they should not diminish during starvation, since Mann has observed that zymogen granules in the salivary glands and along the alimentary canal and the Nissl's granules in the nerve cells are not diminished in

DESCRIPTION OF THE FIGURES.

All the figures show a magnification of 1500 linear diameters, except Figs. 3 and 4, which are magnified 1000 diameters. All figures were drawn with the Abbe drawing apparatus, and each granule is in its correct place.

Figs. 1 and 2 represent human blood stained by "Giemsa" stain prepared by us. They show the alterations blood undergoes after taking an ordinary breakfast. Fig. 1 shows the control or fasting period immediately before breakfast after 10 hours' fast, and Fig. 2 the changes induced in 8 hours after the breakfast.

Figs. 3 and 4 are stained by Mann's hæmatein-eosin. Fig. 3 shows the effect of 20 hours' fast, and Fig. 4 represents the change induced 7 hours after taking 15 grammes of sanatogen.

Fig. 5 represents the white corpuscles of frogs' blood, and Figs. 6 and 7 the red corpuscles of the frog. For detailed description see below.

Figs. 1, *a* and *b*, are two typical neutrophile leucocytes. In both, in addition to the neutrophile granules, a few scattered red granules are seen. Fig 1, *c*, is a typical eosinophilous cell. Fig. 1, *d*, is an exceptionally large lymphocyte, and Fig. 1, *e*, *f*, and *g*, three small lymphocytes, of which *e* shows a very distinct vacuole.

Fig. 2, *a*, *b*, *c*, are three neutrophile leucocytes; in *a* the typical red granules are seen, and this figure shows the average amount of granules. In Fig. 2, *c*, the place of the neutrophile granules seems to have been taken by vacuoles, but in reality the granules are less refractive than in the control cells.

Fig. 2, *e*, represents the diminished affinity for eosin produced by feeding, and Fig. 2, *d*, the typical increase in the nucleo-protein content and probably a stage in the restoration of the eosinophile granules.

Figs. 2, *f* and *h* are large, *i* an intermediate, and *g* and *k* small lymphocytes.

Figs. 3, *a*, *b*, *c*, *d*, are neutrophile leucocytes, and the granules are only represented in *a*. Fig. 3, *e*, *f*, are two eosinophiles; the granules in *e* are distinctly smaller than in *f*. The disparity in the size of the granules is sometimes even greater.

Figs. 3, *k*, *l*, *m*, are large, *n* an intermediate, and *g*, *h*, *i* small lymphocytes.

Figs. 4, *a*, *b*, *c*, *d*, *e*, are neutrophile leucocytes, with the granules only shown in *a*, *b*, *c*. The granules are less distinct and not so purple as in Fig. 3, *a*.

Figs. 4, *h*, *i*, *k*, *l*, are large, and *m*, *n*, *o* are small lymphocytes; *p* shows size of red blood corpuscle.

Fig. 5, *a*, is a typical "fasting" eosinophile; Fig. 5, *b*, an eosinophile six hours after feeding with sanatogen; Fig. 5, *c*, an eosinophile in the process of reforming the eosinophile granules 16 hours after feeding with sanatogen. Fig. 5, *d*, shows an eosinophile surrounded by numerous bacteria. Notwithstanding the very severe septicæmia leading to the destruction of the cell body, the eosinophile granules are but little affected.

Fig. 5, *e*, is a typical resting or fasting lymphocyte with the basophile cytoplasm aggregated in two places to form pseudopodia-like processes. Fig. 5, *f*, is a lymphocyte 12 hours after feeding, and *g* a similar one 16 hours after feeding with sanatogen. Fig. 5, *h*, is a small fasting neutrophile leucocyte, without any red granules; while *i* and *k* show numerous purplish-red granules 18 and 24 hours after feeding with sanatogen.

Fig. 6 is a red blood corpuscle of the frog six hours after feeding with sanatogen, and is undergoing amitotic division. The cell membrane is seen distinctly above the constricted part of the nucleus.

Fig. 7 is a red blood corpuscle of the frog undergoing mitosis, stained with hæmatein and methylblue-eosin.

Fig. 8 is a red blood corpuscle of the frog in the resting condition.

Fig. 9 is a red blood corpuscle of the frog at the seventh hour of digestion, showing an increase in the stainability of both the cytoplasm and of the nucleus.

Fig. 10 is a red blood corpuscle of the frog at the height of digestion, showing the increased nuclear metabolism.

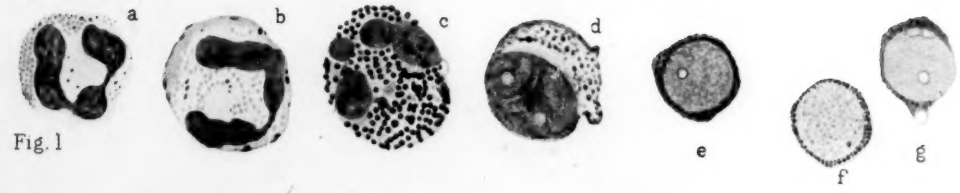

Fig. 1

Fig. 2.

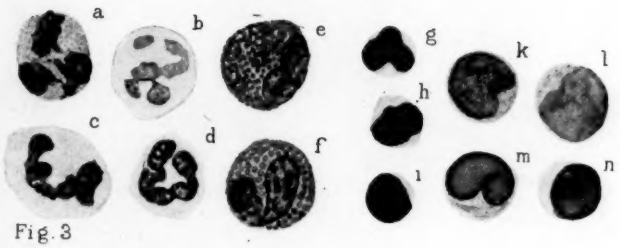

Fig. 3

Fig. 6.

Fig. 7.

Fig. 4.

Fig. 8.

Fig. 9.

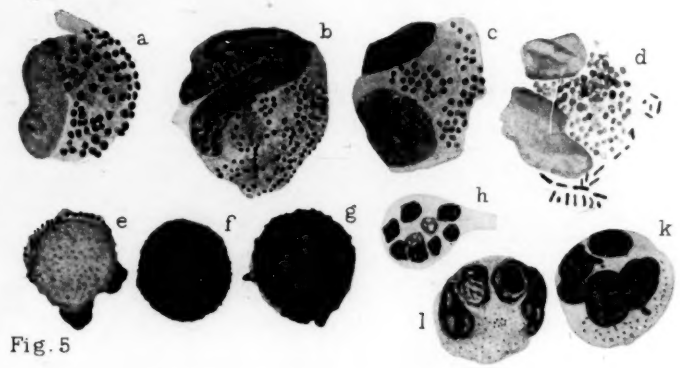

Fig. 5

Fig. 10.

To illustrate the article on The Changes in Blood by Feeding, by Dr. Gustav Mann and Dr. John G. Gage.

the rabbit by even a 22 days' fast. Since the granules in the leucocytes are not diminished during a fast, but are to some extent during the period of digestion, we may conclude that they are of the nature of zymogen granules.

As the white blood corpuscles are constantly changing their positions relative to the plasma immediately surrounding them, it is most likely that the granules of the leucocytes are used by each individual cell, or, to put it differently, that they are intracellular zymogen granules utilised by the cells themselves in rendering the available food material suitable for their own needs, instead of being used extracellularly as in the salivary glands. At the same time the comparatively small amount of diminution in the size and number of the granules makes it very likely that these granules subserve some main function other than that of acting on the already digested food materials in the plasma. We suggest that they digest body cells which have died, as will happen, for example, to the nerve cells in the distal part of a severed nerve, or during the atrophy which the mammary and lymphatic glands undergo after lactation, or in cases of atrophy owing to pressure of neighbouring organs as in cancer, or by taking up bacteria, &c.

Occasionally leucocytes will have to combat bacterial invasion, but how little, even in cases of severe septicæmia, the granules of ecsinophilous cells may be affected is shown in Fig. 5, *d*, where an eosinophile leucocyte is surrounded by numerous bacilli without any apparent change in the granules, although the cytoplasm has become disintegrated.

Finally, the blood pictures of each individual are quite characteristic, as will be seen by comparing the white cells in Figs. 1 and 2, representing those of a young student, with Figs. 3 and 4, representing those of the elder of us, both showing characteristic nuclear differences. Figs. 1 and 2 are magnified 1500 times, while Figs. 3 and 4 are only magnified 1000 diameters.

The main general fact, determined histologically, that cellular metabolism in both plants and animals is invariably accompanied by an increase in nuclear metabolism, as evidenced by the increase in nucleo-protein material, is being investigated macrochemically by us at present, and our results will be communicated shortly.

A NOTE ON A CASE OF DOUBLE CATARACT:

THE CASE OF GENERAL BOOTH.

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THE worldwide interest in General Booth's great career and far-reaching work was, if possible, deepened by the general knowledge that towards the end of his life he carried on that work with the profound disabilities incident upon cataract. I consider it almost a public duty to record the clinical history of his case.

General Booth first consulted me on Dec. 2nd, 1908. I found the lens of the right eye almost entirely opaque; he could see large objects, such as a hand held in front of it, but could read none of the test types. There was central opacity of the left lens, the vision was 6/60 (= 1/10 of normal) aided by a −6 lens. On Dec. 16th I removed the cataract from the right eye by simple extraction without iridectomy, and uninterrupted recovery took place.

A month later—i.e., on Jan. 15th, 1909—the pupil was not quite central, being drawn slightly upwards towards the scar of the operation wound; there was no prolapse of iris and the pupil was active. Vision 6/24 c. + 12 D. J. 8 c. +15 D. There was some opaque capsule. On April 1st, 1909, the vision was 6/18 badly c. + 13, J. 2 c. + 15. On April 8th the capsule was needled, and on the 15th vision was 6/12 c. + 13 and J. 1 c. + 15. There was some entropion of the lower lid, which, however, righted itself.

I have no note of the case after this until August 18th, 1909. The patient was going about doing his usual work and reading and writing with ease. On the morning of this day he appeared in my consulting room at about 4 A.M. He had been on a motor tour rushing about in heat and dust, and, contrary to my directions, without at times any protection whatever for his eyes. His car possessed a wind screen, but he would not use it nor his goggles, as from time to time they prevented the people seeing him and him from seeing them. He said that he had come to me straight from Newport, Monmouthshire. He told me that 48 hours before his right eye became suddenly painful and that the sight was lost in a few hours. There were muco-purulent discharge and lymph in the pupil; the cicatrix was bulging and the iris was pushed into it; the eye was stony hard and very painful, and there was bare perception of light. There was also moderate conjunctivitis of the left eye. I sent him to a nursing home, and a vaccine prepared from the discharge from the right eye was injected within 12 hours, but it did no good. On August 21st I eviscerated the right eye. Recovery from the operation was rather slow but uninterrupted. I ordered him an artificial eye, which he wore with comfort.

On March 10th, 1910, the vision of the left eye was J. 16 with an ordinary pupil; there was some improvement when it was dilated, so I prescribed a solution of atropine, which was used from time to time up to a few days before the extraction, which did not take place until more than two years later. At this time (March, 1910) the patient complained of giddy attacks, and at times of lapses of memory. In April his urine was albuminous, but the albumin had disappeared at the end of June.

By Nov. 8th, 1910, the vision had become worse, and he could only make out J. 19. I advised him to dispense with an operation as long as he possibly could.

I saw him in April, June, and October, 1911. The vision was becoming slowly worse, and at this last date he could barely make out J.20 with the pupil fully dilated. The lens was almost entirely opaque and very dark coloured.

On Feb. 22nd, 1912, he again consulted me. His sight had now become so bad that he could barely find his way about. I advised an operation, and at the same time pointed out to him that failure meant total blindness, but that the risk was very small. He decided to have the operation performed, but wished to postpone it for about two months, and eventually May 23rd was fixed. On that day, assisted by Mr. Herbert L. Eason and Dr. E. W. Milne, I performed the operation under cocaine—a simple extraction without iridectomy. The operation was most satisfactory, there was no difficulty of any kind, the lens escaped easily, no soft matter remained behind, and the iris returned to its place. There was no bleeding into the anterior chamber, and the patient could see my fingers plainly. The eye was bandaged and the patient was put to bed. On the following morning the condition could not have been better. I did not remove the bandage, but lifted up the dressing. He partly opened the eye and found that he could see with it. On the following morning the condition was equally satisfactory.

But on the third morning a change had taken place. The lids were red and slightly swollen, and there was muco-pus on the dresing; the eye had obviously become septic. I was in the country, and was on the lawn of the house I was at for the time when a motor car appeared with a Salvation Army man in it. He brought a note from Dr. Milne, but what was still more eloquent than any description the dressing taken from the eye that morning: it was smeared with muco-pus. I left in the motor at once and arrived at Hadley Wood, where the patient was residing, 70 miles off, in under three and a half hours. Dr. Milne gave an anæsthetic, and I thoroughly examined the eye; the incision was firmly healed, the pupil circular and central, but the iris was cloudy and there was muco-pus hanging about the conjunctiva. I thoroughly cleansed the eye with a solution of formalin 1 in 2000—I could not get any peroxide—I reapplied the bandage, and the patient went back to bed. On the following morning there was no more pus, the cornea was clear, and fingers could be seen. I hoped that the progress of suppuration had been stopped. The day after matters had changed ver much for the worse, the incision had given way and was blocked by a bulging, pus-infiltrated iris. There followed the usual course of a panophthalmitis. Later in the same day I saw the patient again in consultation with Mr. Treacher Collins and we had to point out that there was no chance of saving the eye. After that it was treated with hot compresses and the inflammation gradually quieted down, and when I last saw General Booth on June 28th the eye was shrinking but giving no trouble.

Remarks.—This case may be classed amongst what Sir James Paget (I think it was) described as "The Disasters of

Surgery." The operation performed in December, 1908, on the right eye was entirely successful, and after a needling of the capsule in April, 1909, vision was 6/12 and J. 1 (diamond type) with correcting glasses, and this standard was maintained until August 15th in the same year. The pupil was not quite central, being drawn slightly upwards, and there was always a weak cicatrix which was probably the cause of the General's undoing. Some time in July of that year he started on what he called a motor tour, which for him meant rushing about from place to place and addressing meetings and preaching in different places two or three times a day. A part of the tour was in the Black Country, and the second week in August was about the only hot time there was in that year. It was not only hot but dusty. General Booth entirely disregarded my very strongly expressed instructions that he was to go about in a motor with a wind screen and to wear goggles; he went in a quite open car without adequate protection for his eyes. He got them both infected, probably by dust of some sort, with the result that the eye which had been operated on was attacked by suppuration and lost, while the other had only a mild conjunctivitis. After he had recovered from the evisceration performed in August, 1909, I saw him from time to time, off and on. He was not in very good health in March, 1910; he had occasional giddy attacks and lapses of memory, and from April till June of the same year he had albuminuria, from which, however, he appeared to entirely recover. The vision of his left eye, which in March, 1910, was good enough to enable him to make out J. 16, and which was somewhat improved by atropine, became gradually worse, but I encouraged him to go on without operation as long as he could. He did so until about the end of 1911, when his sight had become so bad that he could barely find his way about; indeed, he met with one or two minor accidents on account of not being able to see. It then appeared to me that he had much to gain and very little to lose by an operation, and further, he was in much better health than he had been for some time. I pointed out to him that there was a risk and that if the operation failed he would be totally blind, but that there were very long odds in his favour, and that I was willing to take the risk if he was. He asked one question: "If you were in my place would you have it done?" I said certainly I would. That quite decided him and all that remained to be done was to fix a time. General Booth at that date had some work which he wanted to finish, and eventually the date for operation was fixed for May 23rd. On that day I operated. I did a simple extraction under cocaine.

Nothing could have been more satisfactory, as will be seen from the notes, and the bulletin sent to the papers was, "The operation was entirely successful; the ultimate result depends on the General's recuperative power." When I covered the eye and bandaged it I thought that success was certain, and was confirmed in that opinion on the following morning when I lifted up the dressing and found all was well, and that the patient, when he partly opened the eye, could see. On the third day Dr. Milne, who was in attendance, at once saw that mischief had occurred, and the sequence of events I have narrated. How the eye became infected I am unable to say. I used every precaution; as I told the patient afterwards, the only omission I could think of was that I had not boiled or roasted myself. It is impossible to guard the eye entirely from septic influences unless both canaliculi are tied, because through them the eye is in direct communication with the whole of the alimentary and respiratory tracts, but considering the rarity of sepsis after eye operations this seems scarcely justifiable as a routine practice. But the patient seemed to have "a septic diathesis," if I may use such an expression. Both his eyes became infected, but apparently by a different coccus on each occasion. In the first eye it was the streptococcus pyogenes longus slightly contaminated by bacillus coli communis; in the second, by what was described as a pure growth of staphylococci. Besides, he had been once or twice troubled by suppurating follicles. I looked carefully for these before each operation. I regret two things in the case: (1) that the last operation was not done two or three months before when General Booth was in better health; (2) that it was not postponed for another month, in which case I should not have done it, for looking back on the whole history I feel certain that he was not in his best condition on May 23rd, when the operation was performed.

Brook-street, W.

ACTINOMYCOSIS OCCURRING IN TUBERCULOUS SUBJECTS.

THREE CASES.

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THESE are instances of actinomycosis occurring in patients with positive reactions to tuberculin used in diagnosis. All were looked upon, for a while, as cases of active tuberculosis with foci in the neck glands or in the lungs. One with tuberculous adenitis had been considered suitable for a tuberculin course. But in no one was the acute process due to the tuberculous infection. They were met with, at long intervals, in different institutions. Quite possibly such are not rare.

CASE 1.—The patient, a male epileptic, aged 35, had been under treatment as an out-patient at one of the general hospitals, where, as was learned from the history given, a hydatid had been suspected, and previously to that a pleurisy. He did not attend regularly. He had been looked upon latterly as tuberculous, with cough and loss of weight. When first seen he had had for "many months" pain, whose greatest intensity was referred to a point in the sixth right intercostal space, outside the nipple line.

Fits were then frequent. He was treated for epilepsy. There were, at the same time, some dulness extending into the sixth space in the axilla and a rub in the seventh space in the posterior axillary line. A Calmette was positive. The temperature was irregular and the epilepsy very severe. He was looked upon as a tuberculous epileptic; but there gradually appeared diffuse swelling with a feeling of subcutaneous infiltration in and around the area of greatest pain. At the same time the pain increased. There was increased tenderness on pressure over the point mentioned, with distress on turning in bed, and sensation of cutting and of burning on inspiration. This went on for weeks. His wife objected to operation of any kind. The pain became almost continuous, though the extreme tenderness bore a suspicious relationship in time to the periods of the fits. By this time there was evidently more than tuberculosis of lungs or pleura. The infiltration extended around the lower ribs and into the loins. Consent to explore was given at last, and enough material was obtained through a small incision. It was practically all streptothrix. He was given iodide of potassium, 10 gr. t.i.d., and the dose was rapidly increased to 20 gr. every four hours. The discharge, which had become free some days later with larger opening, had nearly ceased in eight weeks. At this time the iodide was stopped for a few days owing to iodism. The discharge increased and the pain recurred. Iodide was resumed, and within a week the discharge was slight. It took over nine months for all induration and pain to disappear and for healthy scars to form. The patient was kept on iodide for over a year. When last heard of there were no further signs of actinomycosis nor of active tuberculosis. The epilepsy was unaffected.

CASE 2.—The patient, a man aged 40, with a history of syphilis, had been under treatment for pulmonary tuberculosis, then considered quiescent. When first examined there was pain in the right chest in the nipple region, with irregular temperature and dulness over the area indicated. He was put to bed, tuberculosis being considered active. After some time there was tenderness on pressure about the fifth interspace, with a feeling of thickening and resistance. There was gradual increase of the tumour with tenderness, and later distinct softening. A gumma was then suspected. Some material, got through the incision, was examined and streptothrix found. Iodide was given as before, and healing proceeded much more rapidly to a healthy scar. When last seen there was no sign of active tuberculosis.

CASE 3.—The patient was a schoolgirl, aged 11, with chronic enlargement of the neck glands and poor general nutrition. The glands had been considered tuberculous and

suitable for tuberculin treatment. The patient was first seen as a mild case of diphtheria, and the condition of the neck with peculiar infiltration attracting attention later, she was kept under observation through the kindness of a private practitioner. The left maxillary glands and those in the anterior triangle seemed involved, with considerable surrounding infiltration. This latter had increased in a few weeks. There was more density, and later localised softening. In the discharge obtained through incision we found streptothrix. On iodide the swelling decreased considerably. She was last seen six weeks later, and was then lost sight of. She had probably tuberculous adenitis as well.

These cases are described as they were met with, the actinomycosis obscuring the diagnosis of active tuberculosis in tuberculous subjects. But the actinomycosis may deserve a word, though it be no longer considered rare. In THE LANCET within the past five years over a score of reports have appeared of cases involving various viscera. In Case 1 in the above series in all probability the lesion was primary in the liver. In Case 2 the distress caused was so slight compared with Case 1 that one can only think that the active growth was entirely confined to the parietes. As in Case 3, which was recognised comparatively early, the growth yielded quickly to treatment. No one can question the efficacy of potassium iodide in these cases. In some reports of the cases described in THE LANCET that efficacy has been questioned, but this has not happened recently. Probably in cases of failure the doses have been much too small. As to dosage, Case 1 did well on a maximum of 120 gr. in 24 hours, even with such extensive involvement of tissues. I can only doubt whether larger doses could have accelerated cure. The treatment was kept up in this case long after the acute signs had disappeared, simply because there was no means of telling when active growth had ceased. Up to 320 gr.[1] have been given, however, and up to 240 gr. before improvement.[2] On the other hand, instances of spontaneous cure have been reported.[3]

Possibly, tumours due to actinomycosis are looked upon sometimes as gummata, and being cured by the treatment for gummata, the immediate result is the same to the patient. Case 2 was shown to an excellent practitioner, shrewd but obstinate, and even the cause was demonstrated. But he would have none of it. "The cause is pox," he said, "pox, and none of your wire worms." However, these cases in the early stages were difficult to recognise and may be worth recording, though similar cases still get well, called gummata.

North-Eastern Hospital, N.

A CASE OF RUPTURE OF A HÆMORRHAGIC CORPUS LUTEUM

INTO AN INTRALIGAMENTARY CYST, RESEMBLING RUPTURED ECTOPIC PREGNANCY.

BY S. GORDON LUKER, M.D. CANTAB., F.R.C.S. EDIN.,
OBSTETRIC TUTOR AND REGISTRAR AT THE LONDON HOSPITAL.

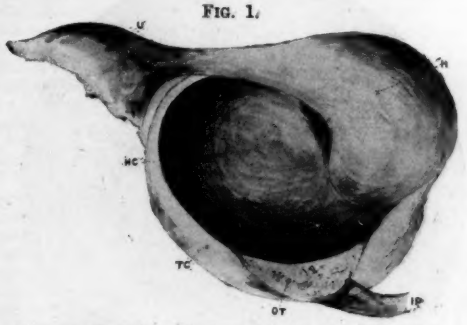
THE patient, a married woman, aged 27, had one child eight years ago; no miscarriages. She was quite well till August 5th, when she first felt pains in the lower abdomen, which persisted on and off till the 16th; on this date she had an acute attack of pain in the abdomen which made her vomit. The menstrual period, which should have started on this date, did not appear. On the 21st there was a second attack of acute pain which made the patient vomit, and on this day she started losing blood per vaginam. She was brought up to hospital and admitted at 2 P.M.

Catamenia: Always quite regular; never went over her time before. Last normal period July 13th–18th. Period expected August 16th did not appear until August 21st. Previous history: No previous illness. No previous attack of a similar nature. Condition on admission, 2 P.M.: The patient was in acute pain; pulse 88; temperature 100·5° F. Abdomen: No marked distension or general tenderness. Rising out of the pelvis on the right side to the height of four fingers' breadth above the pubis was a very tender swelling. Per vaginam brownish blood-stained discharge. Cervix softened. Body of uterus was somewhat pushed over to the left. Behind and to the right of the uterus was felt a very tender swelling, continuous with the swelling felt per abdomen and extending some way down behind the uterus.

The patient was watched and the pulse-rate taken hourly. At 3 P.M. the rate was 88 per minute; 4 P.M., 86; 5 P.M., 110; 6 P.M., 114; 7 P.M., 116; 8 P.M., 118. The patient had vomited once since admission, and the pain was getting worse; it was therefore decided to perform laparotomy immediately, and the tentative diagnosis of ruptured tubal gestation was made.

On opening the abdomen an intraligamentary cystic tumour was seen closely adherent to the right side of the uterus, together with right hydrosalpinx; the whole tumour

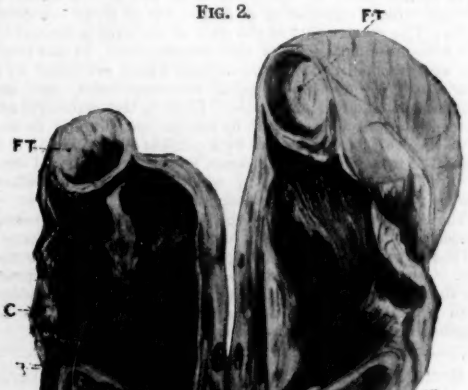
FIG. 1.



Diagrammatic sketch of the tumour *in situ*. TC, Thin-walled cyst. HC, Hæmorrhagic cyst. U, Uterus. H, Hydrosalpinx. IP, Infundibulo-pelvic ligament. OT, Ovarian tissue.

was of about the size of a large fist and was causing some rotation from left to right of the uterus, which was pushed over somewhat to the left side. The tumour was removed by division and ligature of the ovario-pelvic ligament, by dissection from the base of the broad ligament, by ligature of the broad ligament with its vessels close to the uterus, and by ligature of the uterine end of the tube; the round ligament, which was very adherent in one place, was divided. (Fig. 1.) During removal two cystic cavities, forming the greater part of the tumour, were unavoidably

FIG. 2.



Sketch of the tumour in cross section (after hardening). CL, Corpus luteum. R, Site of rupture. C, Interior of cyst. FT, Fallopian tube.

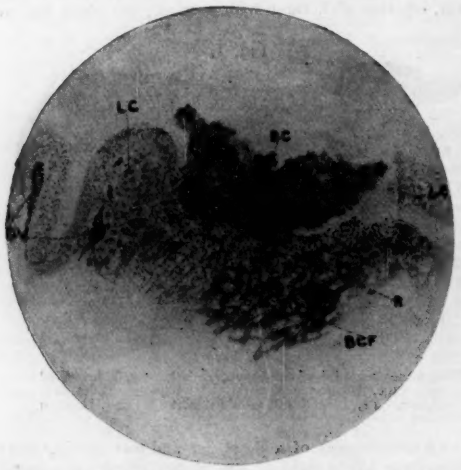
ruptured. One was very thin-walled and contained about half a pint of colourless fluid; the other, which was thin-walled in one place, contained several ounces of dark red hæmorrhagic fluid. The left tube and ovary were healthy.

[1] Brit. Med. Jour., 1909, vol. ii., p. 453.
[2] Ibid., 1910, vol. ii., p. 853.
[3] THE LANCET, 1906, vol. ii., p. 158.

The patient made an uneventful recovery; menstruation reappeared on Sept. 27th.

The specimen was examined after hardening. The right ovary was found spread out over the lower part of the tumour, and contained a large hæmorrhagic corpus luteum which had ruptured into the cyst and was the source of the hæmorrhage. The site of rupture through the wall can be clearly seen in Fig. 2, R. This was confirmed by microscopic sections, by which it was also found that the cyst, into which the hæmorrhage occurred, was epoöphoronic in origin. Fig. 3 is reproduced from a drawing made from a section through the site of rupture of the corpus luteum.

FIG. 3.



From a microscopical section of ruptured corpus luteum. BV, Blood-vessels. LC, Lutein cells. BC, Blood clot. R, Position of rupture. BCF, Blood clot and fibrin.

The following is an extract from the reports on the sections by Dr. H. M. Turnbull, pathological department: The corpus luteum contains fibrin and red corpuscles. There is a break in its wall which is filled by a plug of red thrombus. The thrombus projects into a cyst. The greater part of the cyst is not lined by epithelium; at one spot a lining is present which consists of a single row of short columnar cells. The greater part of the wall of the cyst is formed by the fibro-muscular tissue of the mesosalpinx. In this there are several small epoöphoric tubules which are lined by a single row of cubical or small columnar cells, and are embedded in masses of muscle. Close to the main cyst are small cysts which are lined by similar epithelium. In one part the wall is overlapped by a portion of the ovary; it is separated from the ovarian stroma, however, by a broad zone of areolar fibrous tissue, in which there are abundant vessels; the cyst is clearly epoöphoric.

The interesting points of the case were: (1) the resemblance of symptoms and signs to those of ectopic pregnancy; (2) the source of the hæmorrhage. The case was under the care of Dr. H. Russell Andrews, to whom I wish to express my thanks for leave to publish these notes. The drawings from which the figures are reproduced are by Mr. E. E. Paget-Tomlinson, resident accoucheur.

BOURNEMOUTH MEDICAL SOCIETY.—The opening meeting of this society was held on Oct. 9th. The retiring President, Dr. A. C. Coles, was in the chair. Before proceeding to the business of the evening, the President referred to the great loss sustained by the death of Dr. T. F. Gardner, a past-president of the society, and a vote of condolence with Mrs. Gardner was passed by the members present. The President, in introducing the President-elect, thanked the members for their support during his term of office. Dr. Frank Fowler, the new President, then took the chair and read as his address a Review of Electrotherapy and Radiology. A vote of thanks for the address was passed with acclamation. Mr. F. Belben showed a specimen of a Fibroid Uterus containing a Hydatidiform Mole.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Exhibition of Clinical Cases.

A MEETING of this section was held on Oct. 11th, Sir WILLIAM OSLER, the President, being in the chair.

Dr. A. M. GOSSAGE showed a woman, aged 53, the subject of Coarctation of the Aorta. The patient was the same as that exhibited at the last meeting of the section by Dr. F. S. Langmead.

Mr. H. MORRISTON DAVIES showed a man, aged 47, illustrating the favourable results of Arteriovenous Anastomosis for Gangrene due to Syphilitic Endarteritis. This patient was shown at a meeting of the Clinical Section a year ago. The history of the case was briefly as follows. He had had syphilis and had been a heavy drinker. He first noticed pain in the left foot and discolouration of the middle toe in March, 1911. The toe became gangrenous and was amputated in June and the wound was left open. At the beginning of August two further patches of gangrene appeared, one on the inner side of the fourth toe and one on the outer side of the second toe. The foot was cold and painful, and there was purple discolouration of the great toe, the dorsum of the foot, and round the head of the fifth metatarsal; the amputation wound was unhealed. An arteriovenous anastomosis was done in Hunter's canal on August 15th, 1911, the proximal end of the superficial femoral artery being united to the peripheral end of the femoral vein, and the proximal end of the vein and distal end of the artery being ligatured. The pain and discolouration disappeared after the operation, the foot became warm, the gangrenous patches separated off, and the wound at the base of the middle toe healed. The patient began walking a month after the operation and was discharged from the hospital after another four weeks. A week later he was readmitted under the care of Sir J. Rose Bradford suffering from a right-sided hemiplegia and aphasia thought to be probably due to syphilitic thrombosis and to be unconnected with the anastomosis. The patient had slowly recovered from this attack and had been able to walk with the help of a stick for some months. The condition of the left foot had remained good. There was, when exhibited (almost 14 months after the operation) no pain, discolouration, or œdema. The patient had a chilblain on the great toe of the left foot last winter, but that cleared up completely.

Dr. A. E. GOW showed (for Dr. W. P. HERRINGHAM) two brothers exhibiting Unusual Rashes. The patients were aged 5 and 2 respectively. The younger was shown by Dr. H. G. Adamson before the Dermatological Section of the society in May of this year. Both children, from a few months of age, had dusky hands and feet, and an eruption. This eruption had become much less marked during the past few months in the elder boy, and with its subsidence the interphalangeal joints, which were previously swollen, had become red and painful. The character of the eruption was briefly as follows. On the forearms, hands, and legs were papules about 3 mm. in diameter, reddish-brown in colour; papules, 5 mm. in diameter with black crusts in the centre; circular, crateriform areas 10 mm. to 30 mm. in diameter, with raised, reddened margins and a large central scar; several healed lesions resembling vaccination marks. The papule apparently passed through its stages in from two to three weeks. The elder child had never been able to walk properly, probably owing to genu valgum, which had become worse during the last year, and he was stated to have lost flesh during this time. There was a fusiform peri-articular swelling on all the fingers. A skiagram showed no alteration in the bones. There was no muscular wasting, the nails were natural, and the tendon reflexes brisk. There were a few palpable glands in the anterior triangles of the neck. The spleen was not palpable, and there was no fever. It was suspected that the lesions were of the nature of a tuberculide. Von Pirquet's cuti-reaction was negative, but after injection of 0·0002, 0·0005, and 0·001 c.c. of old tuberculin there was a general

reaction with rise of temperature to 101·4° F. in the case of the younger boy. There were, however, both previously and subsequently, unexplained rises of temperature. The elder showed no reaction to tuberculin, even with a dose of 0·004 c.c. The Wassermann reaction was negative in each case, and the blood showed no cytological change. As the result of treating the younger brother with tuberculin (T.R.) there was local reaction in the spots, and many healed without passing through the scab stage, the resulting scar being not nearly so marked.

The PRESIDENT showed a girl, aged 20, illustrating Circulatory Disturbance with Cervical Rib. In February, 1912, she had fallen and bruised the right elbow, apparently not a serious injury. About the end of May she had noticed that after using the right arm it became darker in colour, the hand swelled, and the veins in the neck became distended. She looked well; physical examination of the chest and abdomen was negative, there was no enlargement of the glands. The right pupil was a little larger than the left. At rest the right arm looked natural, but measured above the elbow three-quarters of an inch more than the left. There was no atrophy of the muscles of the hand; sensations were perfect. After using the muscles of the right hand for a few minutes the following changes occurred: The skin reddened, at first on the inner side above the elbow, then the redness became general; the arm swelled, increasing a quarter of an inch by measurement; the pulse in the right radial became smaller, the blood pressure fell from 115 mm. of mercury to 90 (it was normally a little less than on the left side), the veins in the neck became enlarged, particularly the external jugular, and there was prominent venous swelling above the inner end of the clavicle. Continuing the exertion the arm felt numb and dead and she had to rest. The X ray pictures showed cervical rib on both sides, the right a little longer, both of moderate size. The case belonged to a group of cases of cervical rib which he had described, in which the arm was normal when at rest, but on exertion became swollen and livid, and muscular effort had to cease—features resembling the condition known as intermittent claudication. In many cases of cervical rib the subclavian had been compressed in the angle between the rib and the scalenus anticus. In the present instance the rib looked short, but it was possible that there might be a cartilaginous extension. When at rest, and with slight muscular effort, sufficient blood reached the limb, but the demand for increased blood following upon exertion was not met, and there was stiffness with numbness and vascular changes. Cases had been reported suggesting Raynaud's disease, and Keen stated that there were at least seven instances of local gangrene of the finger associated with cervical rib.

Dr. F. PARKES WEBER showed a case of Giant Urticaria of Five Years' Duration. The patient, a man, aged 31, was subject to "swellings" of various sizes, which might affect any part of the surface of his body and were generally accompanied by a sensation of itching. The skin over these swellings was always more or less reddened. The swellings were sometimes large enough for a single one to cover the whole of a shoulder or a buttock. Sometimes the swellings succeeded each other quickly, so that he did not become free from them for any length of time. Muscular exertion favoured their occurrence. Scratching made them worse. Diet apparently played no part in inducing them. Temperature (cold bathing, &c.) seemed to make little difference. The swellings sometimes lasted two or three days, but sometimes disappeared within 12 hours. The patient said that as yet nothing had done him any good, and that the affection was neither better nor worse than it was when it commenced about five years ago. There was no history of any similar disease in other members of the family, as there often was in typical cases of angio-neurotic œdema.

Dr. WEBER also showed a case of Multiple Calcification ("Calcinosis") in the Subcutaneous Tissue. The patient was aged 7 and had been admitted to the German Hospital for a large number of hard nodules in the subcutaneous tissue of the extremities and the portions of the trunk adjoining the extremities. Most of the nodules were smaller than an average pea, but some were much larger, having apparently arisen by the coalescence of several smaller nodules. The face, head, thorax, and abdomen were practically free. The nodules as a rule gave rise to no pain or tenderness, and seemed to have developed without the child being aware of their existence. The lymphatic glands in the groins and right axilla, and some in the neck, were moderately enlarged. The nodules were first noticed 15 months ago, and many others had appeared since. One little nodule near the right knee became very prominent and discharged spontaneously. That the subcutaneous nodules consisted largely of calcareous material had been proved both by Roentgen ray examination and by chemical analysis. The nodules occasionally became inflamed and softened and the skin over them adherent. Two such softened nodules had been excised and examined. The gritty material was found to consist of calcium carbonate and calcium phosphate. No tubercle bacilli or other microbes could be detected in the contents of the nodules. Microscopical sections of a softening nodule showed that the nodules consisted of a sponge-like matrix of subcutaneous connective tissue in the interstices of which the granular particles were embedded. "Calcinosis" was probably the most convenient term to be used for the disease in question, and more advanced cases had been described under the headings "Calcinosis interstitialis" and "Calcinosis universalis." Apparently the chief danger was the risk of septic infection associated with the "breaking down" and discharge of the calcareous nodules.

Dr. H. BATTY SHAW and Mr. PERCY HOPKINS showed a boy, aged 7, with (1) Double-jointedness, (2) Dermatolysis ("Elastic Skin") with great Friability of the Skin and excessive Tendency to Bruising, and (3) Multiple Subcutaneous Tumours on the Limbs (? Fibromata, ? Neuromata). The joints were very loose, and the child took particular pleasure in forming almost circles by locking the index and middle finger of each hand. He was somewhat pigeon-chested, and there was marked lateral curvature of the dorsal spine, with the convexity to the left. The skin was soft and could be drawn readily from the limbs and body, as in the condition known as dermatolysis or "elastic skin." Numerous small subcutaneous nodules could be defined in the limbs, from the size of a small millet-seed to that of half a pea. They were not painful and were not restricted to the neighbourhood of the joints, nor apparently to the large nerve-trunks. Bruising was very readily produced even by moderate pressure; the mere holding of one upper arm on the occasion of the first visit was followed by several hand-marked bruises observed a few days later. He fell readily on attempting to walk quickly or to run; the fronts of the knees and the chin bore evidence in the form of scars. Quite small falls caused the skin to rupture. So far as either parent knew there was no other example of such a condition in any member of their respective families.

Mr. LAWRIE H. MCGAVIN showed a patient illustrating Abdomino-perineal Excision of the Rectum; Transverse Colostomy. Eighteen months ago the man, aged 57, was admitted with carcinoma of the second part of the rectum causing much pain on defæcation. The growth was a large cauliflower mass, bleeding readily, and very slightly attached to the sacrum. Under chloroform a transverse colostomy was performed, and the abdomen having been opened both internal iliac arteries were ligated. The sigmoid colon was divided between ligatures, the end of the upper section being inverted. The end of the lower portion was carbolised, tied up in gauze, and after the bowel had been stripped into the pelvis was returned to the pelvis and the abdomen was closed. In the lithotomy position, the anus having been closed, the bowel was removed viâ the perineum. A tear occurred at the site of the growth, which was here more fixed to the sacrum than had been thought. Some infection of the wound occurred, but the suppuration was confined to the superficial layers. The bowel was opened on the third day. The patient had made a good recovery.

Mr. MCGAVIN also showed another successful case of the same condition in which the operation had been performed on a woman aged 67. Spinal anæsthesia had been employed almost exclusively. The operation had been done 16 months ago.

Mr. MCGAVIN also showed the following cases: 1. Torticollis following Mumps and associated with Bilateral Cervical Ribs in a girl aged 11. He thought that the condition was probably rheumatic and unconnected with the abnormal ribs. 2. Oblique Fracture of the Femur into the Knee-joint and of both Tibiæ and Fibulæ. Arthrotomy had been performed and the condyle

of the femur united by screws. The patient was a man, aged 48, who had been struck by a swinging balk of timber. The displacement of the femoral fragments had been so bad that 3 inches of shortening had existed. 3. Serous Cyst in the Ramus of the Mandible. This had been evacuated and its lining membrane removed. Microscopical examination gave no indication as to the nature of the cyst.

Mr. MCGAVIN also exhibited an apparatus which he had devised for exerting extension on the fragments in cases of fractures in the length of the tibia. This apparatus could be placed on the operating table, the operation of plating and screwing being carried out upon it, when, by exercise of tension obtained by the screw, the fragments had been brought into line. By its use the operation, especially in cases of old oblique fractures, was greatly facilitated, and the time of operation much reduced.

Mr. PAUL B. ROTH showed a carman, aged 54, with Traumatic Myositis Ossificans. An ossified mass 4½ inches long and ½ inch broad occupied a position in front of the right femur. Its upper part was attached to the bone, but its lower was fragmented and seemed to be free in the muscle. It had followed a kick by a van horse.

Dr. F. E. BATTEN showed a case of Tremor (? Nature). The patient was a man aged 43. In December, 1911, he had an attack of swelling, pain, and redness, involving chiefly the hands, to a much less extent the feet, lasting about a month. In August, 1912, he had a second similar attack of about a month's duration. Shortly after the second attack his arms and legs began to shake slightly, both at rest and on movement. The shaking gradually increased, especially on the right side, and reached its height in about a month. He was then unable to hold anything in his right hand, and his right leg appeared to drag. Since then the shaking had lessened somewhat, especially on the left side. He complained also of occasional painful cramps on the dorsum of the right foot. The patient's emotional state was decidedly exalted. The tremor affected all four extremities and persisted during rest. It increased by movement and when the patient felt himself observed. The tremor of the right hand when at rest was coarse, wide, rapid, consisting chiefly of rhythmic lateral movements at the wrist, with accessory accompanying movements at the elbow and shoulder. The static oscillations were chiefly in a vertical axis, and sometimes became so violent and rapid as to obscure altogether the outline of the hand. The movement tremor resembled the intention type in that the oscillations became more violent and of wider range towards the close of the act. Dr. Batten considered the tremor was "functional," and unconnected with organic disease.

MEDICAL SOCIETY OF LONDON.

President's Address.—Anæmia of the Pernicious Type with Acholuric Jaundice.

A MEETING of this society was held on Oct. 14th, Sir W. WATSON CHEYNE, the President, being in the chair.

The PRESIDENT in his opening address referred to the serious loss the society had sustained during the last year by the deaths of several of its most distinguished members. He spoke especially of Lord Lister. After mentioning his pioneer work in antiseptic surgery, which had been recognised not only by his profession and by his country, but by men of all professions and of all countries, he said:—

Gentlemen, in taking the chair to-night I have, in the first place, to thank you for the honour you have done me in appointing me your President. This honour is especially great when we look at the list of distinguished men who have already occupied this chair, and when we remember that this is the oldest medical society in London, and, I presume, in this country; it was established nearly 140 years ago, and still retains its vitality and position as a very important society. It has always held a high position, and it is interesting to note that in spite of the existence of other societies most of the leading men in the profession have been members of the Medical Society. As time goes on the old members disappear, but their vacant places have always been adequately filled by the fresh generation, and the work of the society goes on as well as ever. It is but seldom that men appear whose place cannot be quickly and satisfactorily filled by others, but during this last session we have lost one such man—I refer, of course, to the late Lord Lister.

I propose to make a portion of Lister's work the subject of the few remarks I shall make to-night, but before doing so I may refer very briefly to some others who have also died during this year, and whose deaths are a great loss to this society and to the profession in general. Sir William Allchin became a member of this society in 1878 and died last February. He was president in 1901, having previously filled the offices of vice-president and orator, and for the last 18 years he acted as honorary librarian, and rendered most valuable services to the society in that capacity. During the term of his presidency he presented the gold enamelled badge which, as president, I have now the honour of wearing. Another very eminent member of this society died about a year ago in Dr. Hughlings Jackson, who also was an old president of the society, having filled that office in 1897, after having previously held the offices of vice-president and orator. His work is classical and so well known that I need not refer to it.

Then, again, about a year ago, we had to regret the loss of Dr. Pavy, who was a striking example of a man carrying on his work to the very last, even though at the time of his death he was over 80 years of age. He was vice-president of this society and delivered the Lettsomian lectures as long ago as 1860 on "Certain Points connected with Diabetes," a subject which absorbed a great deal of his energies, and with regard to which he was actually making further investigations at the time when he was seized with his fatal illness. Scarcely two months ago we had to deplore the loss of Mr. Clinton Dent, a man regretted by all, not only for his scientific attainments, but also for his kindly and social qualities, which endeared him to all with whom he came in contact. He was elected in 1883, and was thus a member for nearly 30 years, and had served on three occasions on the council of the society. Among other names that I may mention are those of Sir Frederick Wallis, who was a distinguished surgeon and had especially devoted his attention to rectal diseases; he had been honorary secretary of this society and also a member of council. Quite recently we lost Mr. Leonard Bidwell, who had acquired a well-merited reputation as a surgeon especially in abdominal work and whose early decease is much regretted; he had also been a member of the council. Another member of the council who has died during the past year is Dr. J. E. Ranking, who always took a great interest in this society. Among others who were not so actively engaged in the working of the society I may especially mention Dr. William Murrell, a physician at Westminster Hospital and a distinguished therapeutist.

During this year not only this society but the medical profession all the world over have sustained a very great loss in the death of Lord Lister, who was elected an ordinary Fellow in 1878, the year after he came to London, and in 1904 the society did itself and him the honour of electing him an honorary Fellow. Lord Lister was by no means a passive member of this society, but was greatly interested in and actively contributed to its work. His first contribution was made in 1883 on the subject of the Treatment of Fracture of the Patella. This was followed by two communications on the subject of antiseptic dressings, his work at that time being chiefly concentrated on trying to find an efficient and at the same time a non-irritating dressing for wounds. His first paper on this subject was communicated in 1884 on Corrosive Sublimate as a Surgical Dressing, and his second paper in 1889 on a New Antiseptic Dressing, the double cyanide of mercury and zinc dressing, which is still used by many surgeons. In 1891 he delivered the oration of this society on the Coagulation of Blood in its Practical Aspects. In that oration he gave a short account of the work which he carried on many years before and of fresh facts which he had since ascertained.

On looking back over the list of addresses made by your presidents on their election, I find that they have had reference to a great variety of subjects, some connected with the particular work which the president was chiefly interested in, others referring to some general points of medical education or to the history of the society itself.

It seems to me that perhaps I might interest you most if I take up the few minutes which are at my disposal by referring particularly to one or two points with regard to Lord Lister's work. I need not go into his qualities as a man, his wonderful mental acumen, his great humanity or

the great work which he did in revolutionising the practice of surgery. Unlike many great pioneers, his work has been appreciated to a considerable extent while he still lived, and the impressive ceremony at Westminster Abbey on the occasion of his funeral was a striking testimony to the fact that the value of his work has been recognised, not only by his profession and by his country but by men of all professions and of all countries. There is one phase of his work which I do not think is properly appreciated, and which I fear may be less recognised as time goes on, and that is, that in addition to all his great qualities and his wonderful scientific attainments, he was one of the most progressive and careful practical surgeons of his day, and has exercised an enormous influence, not merely in regard to the question of sepsis, but also in the advance of actual surgical operative practice; in fact, in the early days he was decades ahead of his fellows in the actual surgical treatment of his patients as apart from the treatment of wounds.

As soon as he had satisfied himself that he was on the right track with regard to the abolition of septic diseases, and that he could reckon with considerable certainty on excluding sepsis from wounds, he realised the enormous revolution that this discovery must make in the actual practice of surgery, and the enormous expansion of surgical work which would follow as the result of its general adoption. He therefore no longer followed the old routine of treatment, but reconsidered the treatment of every case, to see in what way it might be improved, seeing that sepsis need no longer be feared. This part of his work was one which he never would publish. He did, it is true, publish at a later period, a few papers on his practical work, such as the one which he communicated to this society on fracture of the patella, but he resolutely declined to publish individual cases or the individual advances which he made in practical surgery. I have often urged him to do so, and have offered to collect the material for him if only he would publish it, and, failing that, to act as Boswell to his Johnson if he would allow me to publish from time to time records of the actual practice he was carrying out, but his reply was always in the negative. The great objection in his mind was that he felt that till every surgeon was fully convinced of the necessity for asepsis and of the value of the methods which he advocated, and was efficiently skilled in them, it would be a very serious matter to publish successful results of operations which it would be practically criminal to perform unless complete asepsis were secured. He feared that the publication of such cases might induce others who were neither convinced of the necessity for the aseptic precautions which he advocated, nor skilled in that work, to perform similar operations with terrible disaster to the patient. He could not but feel that if this occurred he would be a party to such disasters, and that such results would reflect on and prevent the extension of the new method of treating wounds which he looked on as a matter of much more vital importance than the introduction of new methods of dealing with surgical cases. He also felt that the system which he was trying to perfect was such a very big and essential thing that he did not wish to distract attention from it by minor publications. And he held that the improvements in surgical treatment which necessarily followed on the abolition of sepsis would naturally occur to anyone who was engaged in active surgical work, as soon as he had satisfied himself that sepsis in wounds was no longer to be feared. I remember a very striking example of the difficulty in which he was constantly being placed in giving advice on surgical cases when he himself was not to be the operator. It occurred soon after he came to London, and though you will no doubt consider his action very unprofessional, you will readily realise his point of view. A patient came to see him with bad cancer in the breast and infection of the axillary glands and one or two glands in the neck. I happened to be doing some experiments for him in the little room behind his consulting room, and he asked me to come in and see the case, so that I heard all that was said. He decided in favour of operation and advised it strongly. The patient then said: "Very well. Mr. ——" (mentioning the name of a leading surgeon who was violently opposed to Lister's methods and was always speaking against them) "generally attends our family, and I shall tell him what you say and ask him to perform the operation." Lister's consternation and distress were great, and evidenced by the flushing of his face, the peculiar movement of the lips, and so on, which were so familiar to his intimates as signs of difficulty. He knew that if this surgeon did this operation which he advised, and it was very possible that he would, if only to show that he was not behindhand, it would in all probability result in violent sepsis and a fatal termination, and he felt that his advice, instead of benefiting the patient, would send her to her death. After much hesitation he plucked up courage and said that, under those circumstances, he would strongly advise her not to be operated on. No doubt such an occurrence at the present time would be probably rightly construed as an attempt to secure the patient for himself, but I can assure you, and those who knew Lister will have no hesitation in believing me, that no such thought ever entered his head, and that he was simply imbued with a sense of his great responsibility to his patients and the necessity of giving them his conscientious opinion under the circumstances in which they were placed.

I think another reason why he would not publish his cases was that at the back of his mind there was also the feeling that if he did publish details of his practice, which in every department of surgery was so new and startling, it would have the appearance of glorification of his practical work over that of other surgeons. He was of a very retiring disposition, and self-glorification was not one of his failings. In his paper on fracture of the patella in your Transactions he referred to a patient with ununited fracture of the olecranon, who had seen 18 surgeons before consulting him, and with regard to this he makes the following remarks, which illustrate exactly his way of looking at these matters:—

> I have referred to a case of ununited fracture of the olecranon where 18 surgeons had been previously consulted. I trust no one here will suppose that I mentioned this circumstance for the purpose of glorifying myself. I mentioned it in order to emphasise what I believe to be the truth—that by antiseptic means we can do, and are bound to do, operations of the greatest importance for our patients' advantage, which, without strict antiseptic means, the best surgeon would not be justified in recommending. How wise those 18 gentlemen were in counselling against operative interference, provided they were not prepared to operate strictly antiseptically, I think we must be all agreed. As regards the operative procedure in that case, it was of the most simple character; any first year's student could have done the operation exactly as well as myself, and, therefore, I trust I shall not be misunderstood by its being supposed that I came here to extol my own skill. That which justified me in operating in that case was simply the knowledge that strict antiseptic treatment would convert serious risk into complete safety.

At the same time, although he did not publish his cases, his work was done openly, not only before the students but also before surgeons who flocked to see his practice from all quarters of the globe; as a consequence his methods of dealing with various surgical conditions became widely known and many of the advances which were in reality made by Lister are now attributed to other surgeons.

I think the best way in which I can give you some idea of the sort of practice that Lister was carrying on in the early days will be to give you a few extracts from notes which I took of his lectures during the winter session of 1872 and 1873 and the summer session of 1873, that is to say 40 years ago. These notes are very crude, but I may say in excuse for this that at the time I attended the lectures from which I shall quote I was far too junior to appreciate or understand all the points. I had only completed botany, zoology, and chemistry, and had attended one course of anatomy; I had not yet done any practical surgical or medical work. I was just commencing the elementary courses of surgery and physiology, and I knew nothing whatever about pathology. As a matter of fact, I only attended Lister's lectures during that session because the hour at which his lectures took place was one in which I had nothing else to do, and as the time was too short to go to my lodgings and come back, and as the students in those days had no reading or retiring room at Edinburgh University, I simply went to Lister's lectures as a place to sit down till my next lecture was due. I had not, however, listened to the whole of the first lecture before my enthusiasm was awakened, and I felt that I was listening to something which was too good to forget. The habit of students in Edinburgh in my time (and I am distressed to see that it is not the habit in London) was to take copious notes of the lectures, and as Lister spoke very deliberately and slowly, and as I happened to be a rapid note-taker, I was able

to take down practically all that he said. Further, and this is an example of the influence which Lister had on his hearers, an influence not confined to myself or only a few of the students, I may say that when I went home in the evenings I sat down and wrote out more fully and more completely what I had heard, so that at the end of the session I possessed a fairly complete record of his lectures written out in a legible manner. These notes are still my most treasured possession, and I am always filled with admiration and reverence when I look through them and realise how completely he was able to dissociate himself from the teaching of his day and how sound his views of 40 years ago still remain as judged by modern standards. In this notebook I have a record of 104 cases of various kinds practically exemplifying all the ordinary departments of surgery with the exception of abdominal surgery. Many of these 104 cases are of the greatest interest. I shall only make a selection of four subjects to illustrate the sort of work that was being done.

Suprapubic lithotomy.—Perhaps the most interesting of all the subjects which he considered during that session and that which best exemplifies the way in which he had begun to look at the surgical treatment of those days from a new point of view is the question of suprapubic lithotomy. I have often heard it asked who it was who re-introduced suprapubic cystotomy. I say "re-introduced" because it was performed many years ago in cases of stone in the bladder, more especially by Cheselden, but it had practically entirely disappeared from surgical practice, and had been displaced by lateral lithotomy; in fact, 40 years ago there is very little or no mention of suprapubic lithotomy in books on surgical practice. When, however, the fear of sepsis in ordinary wounds was overcome, a consideration of the two operations led Lister to advocate suprapubic lithotomy in preference to lateral.

[The President then read an extract from his notebook of a lecture given by Lord Lister on the case of a boy with a stone in the bladder in which he recommended suprapubic lithotomy.] The patient was a boy, aged 14, with a stone in his bladder which gave rise to very severe symptoms, and after having gone through the symptoms of calculus and the various kinds of stones he came to the subject of the treatment. He first referred to lithotrity, but said that in this case this procedure was not advisable on account of the age of the boy and the irritability of the bladder. (This was before the days of litholapaxy.) He then pointed out that there were two operations for removing stone from the bladder—viz., through the perineum and above the pubis. After describing the steps of the lateral operation he discussed the dangers, mentioning the following—viz., hæmorrhage, shock, especially when large stones have been dragged through the prostate, inflammation in the cellular tissues spreading to the tissues around the neck of the bladder, extravasation of urine, and pyæmia (with regard to which he stated that the veins may become the seat of suppurative phlebitis and pyæmia). He then made the following remarks on the suprapubic operation, the diction of which I hope you will excuse:—

Now in the hypogastric operation there is no hæmorrhage, no shock, because you do not operate on important parts, not much liability to inflammation, and not much risk of pyæmia; but there is a risk so great that the operation is generally considered unjustifiable, because the cellular tissue, being lax and loose, the urine is apt to become diffused through it and cause violent inflammation and diffuse suppuration, which either communicates with the peritoneum or death occurs from profuse suppuration.

Before Cheselden took to the lateral operation he had performed the high operation nine times, and he had eight recoveries; the ninth patient is said to have died because he washed his hands and face in cold water and also drank cold water; he died of diarrhœa and abscess of the kidney. Another man (whose name I did not catch) had ten cases, eight of which were successful; in one the peritoneum was opened, and the other was like Cheselden's fatal case. There are many striking examples of the success of this operation; it seems to have fallen into disfavour because of the advocates of union by first intention. Allanson (?) left an opening for the free escape of discharge during the first 24 hours, but his successors sewed up the whole wound. You should, in the hypogastric operation, leave the wound absolutely free and open. Heister had diffuse suppuration, but he used strapping; later he saw that it was wrong to bring the edges of the wound together. In Cheselden's first case he made too small a wound.

The danger of the high operation is the danger of diffuse suppuration from extravasation of urine. Urine is bland and unirritating unless it is putrid. In a cavity outside the kidney I once found urine and yet there was no irritation or suppuration. In the child the urine is less irritating than in the adult. In a case of extravasation of urine which I treated antiseptically there was no sloughing. If, then, the high operation is safer, let us see whether it is an advantage.

By means of catgut properly prepared we may stitch the deeps parts together and then bring the superficial parts over them and we never see the catgut again. In two cases, after laying open the sac of an irreducible hernia and after having detached adhesions and returned the bowel, I pared the edges of the deep opening, stitched them together with catgut and treated the external wound antiseptically. (This was probably one of the earliest attempts at radical cure of hernia by closing the sac.) In one of these cases the patient had a fit of insanity and tried the catgut stitches severely, but she has for years had no return of the hernia.

Now might we not stitch up the opening in the bladder, that is to say in performing the operation, we seize the bladder by artery forceps, cut from above downwards, remove the stone and stitch up the bladder immediately, only stitching together the muscular coat, not the mucous. Now is there any need of tying in a catheter? That there is no danger of forcing urine into the submucous cellular tissue of the bladder has been proved by Simon in vesico-vaginal fistula. After paring the edges and stitching them together he tied in a catheter, but later he did not do so but had the urine drawn off by a catheter. Sometimes, however, they forgot to draw it off and no harm resulted, and now he leaves the patient to pass water as she pleases. Hence we shall let this boy pass his water and as long as the urethra is healthy putrefaction never passes back to the bladder.

On Nov. 28th he gave us the details of the operation he had performed three days previously. I need not describe these details except to say that he was not able to distend the bladder satisfactorily and accidentally opened the peritoneum. Whether he stitched up the wound in the peritoneum or not my notes do not say, but he proceeded to extract the stone and then stitched up the hole in the bladder with five catgut sutures, not going through the mucous membrane. The boy was allowed to pass water himself. On the morning of the 28th he was able to hold his water for four hours. At the lecture on Dec. 5th we were told that the boy was doing well, but that the stitches in the skin had been taken out, evidently too soon, and afterwards the wound gaped and granulated, but the stitches in the bladder held. The boy left the hospital well on Jan. 6th, 1873. On May 8th, 1873, he showed us another case of stone in the bladder, and subsequently made an attempt to perform lithotrity, without success on account of the hardness of the stone. He therefore decided to perform lithotomy, and on May 26th he made the following remarks with regard to the suprapubic operation which I may transcribe:

Now what kind of lithotomy are we to perform? Is this a case for hypogastric or perineal lithotomy? For the hypogastric operation the urine must be sweet. If we did it with putrid urine the stitches would putrefy and the abscess would discharge itself into the bladder, and during the operation we may let out putrid urine, &c., and have putrid peritonitis, because I believe if we ever establish this operation that it will be safer to cut the peritoneum.[1] The mere opening of the peritoneum has, I believe, no material risk. Even without antiseptics it is freely opened in ovariotomy. We would have several advantages by opening the peritoneum. For one thing we would have to stitch the peritoneum, and thus the bladder would be more secure because the peritoneum unites very quickly. Again by this procedure we get farther from the penis and we need not provide an escape for discharge, because the peritoneum absorbs the discharge.

[The President also quoted his notes of another case in which Lord Lister abandoned the suprapubic method because micro-organisms were found in the urine. This was very interesting as being probably the first case in which a bacteriological examination of urine was made and in which the result influenced the treatment.]

Varicose veins.—Let me take a second example—namely, the treatment of varicose veins. At that time operation on varicose veins was universally looked on as very dangerous. Various operations had been designed with the view of obliterating the veins without the risk of pyæmia, but they were either unsuccessful or dangerous, and deliberate operations on veins were practically tabooed. Now, as showing the type of Lister's mind and how he was always trying to imitate the processes of nature, he saw on looking at the history of varicose veins that spontaneous cure of individual veins, at any rate, often resulted from inflammation of the veins, which was followed by coagulation of the blood and more or less complete obstruction of the lumen of the vein. The first attempt which he made, therefore, in the treatment of varicose veins was to imitate nature and to try to set up a phlebitis which would lead to obliteration of the lumen of the veins. Now in his lecture on Nov. 7th, 1872, he showed a case of large varicocele in a young man aged 26, and the following are the remarks he made about the treatment:—

Treatment.—A suspensory bandage in general suffices. (Here the palliative treatment had been unavailing.) In addition to this treatment we may cut away part of the scrotum, and when the wound heals it contracts and acts as a suspensory bandage, but by and by it borrows skin.

Often if there is inflammation in the veins the blood becomes

[1] He developed this idea of opening the bladder in these cases a year or two later, but finally abandoned it for the orthodox method. At this time, however, he intended to do it in his next case.

coagulated and the veins become atrophied, and if the inflammation comes on spontaneously it passes off without material risk, and the patient may be cured. Now, if we could artificially cause inflammation of the veins we might cause their obliteration.

Various attempts have been made to excite inflammation artificially, but these have not been satisfactory; one method is to tie the vein. Now, any method of exciting inflammation artificially by external treatment is dangerous, because we may not have a harmless inflammation, but inflammation leading to suppuration of blood in the veins, suppurative phlebitis, and as a consequence pyæmia. One method is to pass needles under the veins and allow them to ulcerate out. Another is to tie the veins with silver wire, and this is often useful and less dangerous than silk. An earring does not cause the irritation that a silk thread would. Threads are put in for the purpose of causing inflammation; these are called setons, and as long as the thread is in the suppuration goes on. Thus, if a rifle ball passes into the tissues it may become surrounded with a capsule of fibrous tissue, and there may be no suppuration, but if a part of the clothes be driven in along with the ball we have suppuration. Now, the explanation of this is as follows. In the case of the thread the material is porous and becomes soaked with blood and serum, which subsequently undergoes putrefaction, and hence it becomes a source of irritation and causes suppuration. But the wire or bullet, not being porous, afford no nidus for putrefaction, and in the same manner glass remains in the tissues. Hence, we see the great influence of putrefaction on wounds, and the results of the antiseptic treatment confirm this, because if a body be introduced among the tissues so as to avoid putrefaction no suppuration follows. Hence, we see how wire is safer than thread. Also from some observations which I (Professor Lister) made some years ago, I found that suppurative phlebitis is due to the introduction of putrid substances into the veins. Every now and then, however, even with wire, pyæmia has been the result, but if we can excite inflammation by antiseptic means it ought to be free from risk, and often the wire does no good.

(*Lecture on Nov. 11th. Varicocele continued.*)—The tying of the vein also often does no good because the veins become opened up and as large as ever. Obstruction, then, at definite spots is not sufficient. To inject irritating liquid into the veins seems the nearest approach to the natural method of cure, but it is not free from danger. In the earlier stages of the use of carbolic acid, undiluted acid was used and irritated the tissues without irritating too much, and I thought it would not be dangerous to introduce it into the veins. I accordingly tried it in a case of varix of the lower extremity, and extensive consolidatiou was produced and the patient left in comparative comfort. Three years afterwards there was scarcely any trace of varix and no varicose ulcer. In other two cases no bad effects followed and consolidation took place, but we have not had time to see the ultimate results.

Now, we must prevent the carbolic acid from mixing with the general circulation, because if it is introduced into the general circulation it would cause general coagulation and death. In the leg I first put on a tourniquet on the limb loosely so as to cause turgescence of the veins without constricting the flow of blood through the arteries, and when the veins are turgid, then stop all circulation in the limb, in the arteries as well as in the veins. Then I use carbolic acid, which, if pure, is crystalline, but on adding 10 per cent. of water to it we get liquid carbolic acid. Then by the fine syringe used for the subcutaneous injection of opiates with a fine tubular nozzle some of the liquid is introduced. The piston has a scale on it and also a screw which can be put to a certain point on the scale and thus prevent the piston going further. One-half minim is introduced at each place, and then a pad of gauze put on to prevent the escape of blood. This is done in several places and an antiseptic dressing is wrapped round the limb. Then I wait 10 minutes till all the blood has coagulated and there is no fluid carbolic acid in the veins, and then the tourniquet is gradually relaxed.

There are also notes of cases of varix in the leg treated in the same manner, of which I may mention one. The case (a man) was shown on Dec. 9th, and was treated a few days later in the above manner. In the lecture on Feb. 3rd he says:—

> In this case the veins so treated are hardly visibly varicose. The coagulum is not yet absorbed, but the limb is not now painful. Here, and in a female patient, we threw in a whole minim at each place, but in both these cases we had gone rather beyond the desirable limits. There was reaction and inflammation, which in the sailor went on increasing for four days, producing inflammatory fever, but under leeching and warm fomentations the inflammation subsided.

And a further note at the lecture on Feb. 20th says:—

> The veins are now hard and occluded, and there is no varix.

In passing I may call attention to the length of time that this patient was in hospital. This was characteristic of Lister. He would not allow a patient to be sent out of hospital till he was quite well, in spite of the protests of the hospital authorities as to the length of their stay. If he undertook the treatment of a case he felt that he was responsible for it to the end; I am afraid few of us are so conscientious. During the same session he applied this method of treatment to hæmorrhoids and to nævi. In the case of hæmorrhoids he pinched the base of the pile by forceps, injected half a minim of pure carbolic acid, and some days after clipped the pile off. In the case of the nævus he cut off the circulation by passing a series of threads around it.

It may be in the memory of some that 15 or 20 years later the introduction of carbolic acid into hæmorrhoids became for a short time quite the vogue, but here in 1872 we have Lister carrying out the same practice. I am not aware that those who introduced this method of treatment ever knew or thought that it had been tried and discarded many years before by Lord Lister.

This method of treating varicose veins has quite fallen into disuse, though I still sometimes employ it in nævi. I am not sure that it might not be well to reconsider the plan in the case of varicose veins, for even removal of extensive portions of the veins does not always lead to a perfect result.

Cancer of the breast.—To take another example, we have the treatment of scirrhus of the breast. At that time the operation for scirrhus of the breast was a very imperfect one, partly because the mode of spread of the disease was not realised, but chiefly for the reason that while a certain number of patients did recover after the removal of the breast alone through a small incision, anything like an extensive operation was very likely to be fatal. An operation which involved extensive opening up of the axilla was considered to be out of the question. Enlarged glands in the axilla were therefore a contra-indication of operation. On March 3rd, 1873, we have the notes of a case of scirrhus of the breast which you will see is the foundation of modern practice, and which was far ahead of surgical opinion and practice at the time. The case was one of scirrhus in a woman aged 48. The tumour was fairly large and there were enlarged glands in the axilla. He pointed out the necessity for removing the whole mamma and not merely the affected portion, and also asserted that the enlarged glands are not a bar to operation, provided that they are all taken away. Having referred to the mode of spread of malignant disease and the secondary infection of the glands, he went on to say:—

> Hence we must suppose that the disease or its germs have been carried along the lymphatics and deposited in the glands. Hence the affection of the lymphatic glands in cancer is as much local as the primary disease, because all the parts are affected with the same kind of cancer. Hence, if it be right to operate on the primary disease, it is right to operate on the secondary if you can take away all the glands. When the axillary glands, except only one or two, are affected, the case is, however, generally regarded as hopeless.

He then went on to refer to a case of a relative of his own, which he had under his care about four years previously. She had developed a large cancer of the breast with enlarged glands in the axilla. She had been refused operation on account of the axillary condition and was arranging to go to a quack doctor. Lister went to see her and persuaded her to wait a few days before seeing the quack. He then went back to Glasgow and made a dissection of the axillary glands, and came to the conclusion that they could be removed. Relying on his antiseptic arrangements at that time to prevent sepsis, he operated on the patient.

> She lived for two years and recovered the power of her arm, and ultimately died of cancer in the liver.

Lister's operations for cancer of the breast, though not so complete as they are now, were much more extensive than any others performed at that time, and he made a point of clearing out the axilla pretty thoroughly in almost every case.

Surgery of bones and joints.—A good deal of Lister's work at that time was concerned with the surgery of bones and joints, in which again he was far ahead of the other surgeons of his day. He laid the foundation of many operations which are now of frequent occurrence; operations, for example, for deformities, such as knock knees and deformed tibiæ, for exostosis, for fractures both recent and ununited, more especially at that time ununited fractures, &c. I have already referred to the first communication which he made to this Society in 1883 on fracture of the patella, and included in that communication were cases both of recent fracture and of old-standing ununited fractures. In that paper he refers to a case of ununited fracture of the olecranon, which was apparently the first of the class of cases which he operated on. This case occurred during the session to which my notes refer. The patient came to the hospital at the end of the winter session, and was not, therefore, shown to the class before operation, but we saw the case afterwards at the lecture on May 15th, 1873, seven weeks after the operation, and by that time the elbow was moving well. In this case he had not buried the wire, but had left the twisted ends projecting in the middle of the wound. Hence on May 15th the wire was removed and the patient left the infirmary with his elbow freely moveable and as useful as the other. Later on Lister gave up the plan of leaving the wire projecting and cut it off and closed the wound. During this session he also operated on an ununited

fracture of the radius and on one of the femur. The latter was a very bad case of fracture just above the knee-joint with the lower fragment turned back and the patella adherent to the lower end of the upper fragment. I need not go into the details of the operation, which does not materially differ from similar operations at the present time; he naturally opened the knee-joint. With the aid of pulleys he gained about an inch in length, and the result was quite satisfactory.

In operating on a case of fracture just above the knee, he mentioned one of ununited fracture of the neck of the femur which he had treated some years previously. Apart from the fact that this is probably the first case of ununited fracture of the neck of the femur which was ever operated on, there is one point of interest in this case—viz., that he pared both surfaces of the bone with a gouge and did not take away any of the chips of bone, because he thought that they would be absorbed. I need not point out that at the present time we sometimes use these chips to fill up intervals between bones.

Except one spicule of bone, I never saw anything of the chips, and now he is walking on two sound legs.

Coming lastly to the cases of fracture of the patella which he brought before this society, I need not go into details, but to show the current surgical opinion in 1887 I may say that one very eminent and leading surgeon, having heard of the first case on which Lister had operated, remarked to his students, in speaking about the risks to which this new surgery was subjecting patients, that "when this poor fellow dies it is proper that someone should proceed against that man for malpractice." The case was quite successful, and was shown in 1883 at the Medical Society.

I have already taken up more time than I had intended. I might have referred to other very interesting cases which occurred during that session, and even then I would have described nothing like all the work which he was doing, because he only brought before the class cases which he could demonstrate from a distance and cases which were suitable for men commencing surgical training. When, as I say, you reflect that this was only the new work of one session, and that this steady alteration in surgical methods had been going on and continued to go on for many years before other surgeons saw their way to follow Lister's lead, you will realise that his work was not simply limited to the application of bacteriology to surgery, but that as a practical surgeon he was far in advance of his time. There is no doubt that the patients who were fortunate enough to come under his care in his wards had chances of recovery from their ailments such as they could not at that time obtain elsewhere.

As a surgeon Lister was a slow operator, but very careful and thorough, and when the operation was completed one could feel sure that nothing had been neglected to make it a success. He could, however, be quick when necessary, and his amputations were performed beautifully and expeditiously. The department of operative surgery in which I always admired him most and in which I have never seen his equal was, however, in plastic surgery. To see him close a defect in the face or elsewhere was a great treat.

Gentlemen, I am afraid I have wearied you, but one cannot be associated so long and so intimately as I have been with such a man as Lister without becoming more or less of a hero-worshipper, and there is so much that can and ought to be said about his work that it is difficult to know where to stop. I said at the beginning that the place of most men is rapidly and satisfactorily filled, but it requires such an extraordinary combination of qualities and abilities to make a Lister that such a man only arises at long intervals. We can only hope that by following humbly in his footsteps we may add some little thing to the progress of knowledge and the benefit of humanity.

Dr. F. J. POYNTON and Mr. H. C. G. PEDLER read a paper upon a case of Anæmia of the Pernicious Type with Acholuric Jaundice. The patient, a woman of 40 years, was under the care of Dr. Sidney H. C. Martin, to whom they were indebted for permission to publish the case. Her general health had been fair, but she had not been strong since a miscarriage 19 years before. Two years ago she had an attack of "jaundice" with fever, dyspepsia, and delirium, from which she completely recovered; in June, 1911, another lesser attack occurred. The present illness began ten days before admission into hospital with bilious vomiting and dyspepsia followed by jaundice. She was very ill on admission with acholuric jaundice, some enlargement of the liver and spleen, great weakness, fever, and dilated heart. During the next ten days she became rapidly worse, with delirium, continued pyrexia, and vomiting. The blood count showed at first an increase in the leucocytes reaching to 35,200, diminution in red cells to 980,000, with an increase in the average size of the red cells and much change in size and shape. The fragility of the corpuscles estimated by Mr. D. Embleton was less than normal; the urine contained no bile pigment; the fæces were normal in colour, and no hæmorrhages, retinal or cutaneous, were present. After ten days of delirium and supervention of a condition which seemed to point to the last phase of a profound anæmia, the patient began to improve. The temperature fell, the colour returned, the red cells increased, and the high colour index dropped. Entering the hospital in March, she left at the end of May; a month later she was again seen, and though apparently as well as in May, the blood count showed that the anæmia was again progressing. A long journey overtired her, and she again broke down with dyspepsia, vomiting, fever, and acholuric jaundice. She was readmitted in July, and delirium reappeared with the palpable spleen and liver of the former attack. The blood count now showed a leucopenia and a definite blood crisis occurred with the appearance of numerous erythroblasts. All August and September to the present date there was continued fever from 99°–102° F. with profound weakness and a feeble and dilated heart. Although the delirium has now disappeared, the red cell count is below 1,000,000 and the blood picture that of pernicious anæmia. In the first attack Fowler's solution was given; in the second, as there was failure to respond to this, neosalvarsan was administered twice intravenously. To the writers it appeared that the disease ran its course in definite waves of activity quite irrespective of either line of treatment. They brought forward the case and compared it with the cases of congenital family cholæmia or acholuric jaundice that had attracted so much attention of late, and also with the rarer acquired chronic acholuric jaundice, a case of which had been published by Dr. Parkes Weber. They pointed out such features of resemblance as acholuria, enlargement of liver and spleen, high colour index, and occasional severe anæmia with outbursts of fever. They contrasted the increased fragility of the red cells in vitro in some of these cases with the increased resistance in the case narrated, and also the widely different outlook in the two groups, and invited discussion on the diagnostic essential of a pernicious anæmia and the possible cause of such a condition as the one recorded.

Dr. C. R. BOX referred to two similar cases under his care. The first, one of megaloblastic anæmia with leucopenia and cholæmia, had been treated with salvarsan on two occasions. Each injection had accentuated the jaundice, but the blood picture had improved afterwards. In the second, the cholæmia was accompanied by severe abdominal crises. Mr. E. M. Corner had excised the spleen, and the girl appeared to be on the way to convalescence.

Dr. F. PARKES WEBER regarded the case as due to chronic septic infection allied to "endocarditis maligna tarda."

Dr. FREDERICK TAYLOR mentioned a case under his care of pernicious anæmia and acholuric jaundice in which the red blood count had fallen so low as between 600,000 and 700,000 per c.mm. There were leucopenia and splenic enlargement. Salvarsan had been administered three times, he thought, on the whole, with benefit.

Dr. G. R. WARD spoke of two Australian cases for which excision of the spleen had been done.

HUNTERIAN SOCIETY.

Sleepiness.

A MEETING of this society was held on Oct. 9th.

Dr. FREDERICK TAYLOR delivered the first Hunterian lecture, taking as his subject "Sleepiness." After remarking on the little attention that had been paid to somnolence as compared with its opposite, insomnia, he referred to the accounts of prolonged sleep in myth and fiction, and recorded several instances of extreme sleepiness taken from

the public press and from medical literature. Two cases under his own care were as follows. A lady, aged 48, suffered for years from constant drowsiness, associated with no other morbid condition than high arterial tension. No relief could be obtained from any kind of treatment, which included vaso-dilators and depletory measures, and she ultimately died from apoplexy. A man, aged 41, very fat, with a turgid, almost cyanosed face, and high blood pressure, had constant drowsiness, which lasted for some years, but subsided under some simple treatment at length. Dr. Taylor discussed the causes of the somnolence in these cases. Purely cerebral and nervous conditions, such as cerebral tumour, catalepsy, trance, and hysteria, were excluded. The difficulty lay in our ignorance of the immediate cause of natural sleep, and some of the hypotheses adopted to explain this were considered. The cases in question could not be referred to overwork, or fatigue, or anæmia. Both had high blood pressure, but though this was recognised and vaso-dilators were employed in treatment no good results followed. Moreover, high blood pressure had been widely regarded as a frequent cause of the opposite condition, insomnia. On the other hand, temporary insomnia was certainly caused by mental excitement, which involved vasomotor paralysis and dilated vessels. The lecturer next considered the hypothesis that the condition was due to fatigue-products or muscle-poisons acting upon the cerebral tissues, and illustrated the toxic factor in the production of sleep by drugs like opium and alcohol, and the less familiar instances of extreme sleepiness in various infectious diseases, such as septicæmia from local foci of disease, typhoid fever, trypanosomiasis, malaria, ankylostomiasis, and the drowsiness of auto-intoxication in gastric and intestinal disorders. The sleepiness observed in myxœdema and acromegaly was of great interest, because the fact gave the opportunity for an ingenious theory, which was advanced by Dr. Albert Salmon, of Florence, to explain not only these exceptional cases of drowsiness but also the origin of sleep itself. The theory was briefly to the effect that fatigue poisons commenced to operate as poisons from the very moment of waking, but that they were neutralised wholly or in part by the internal secretions of the pituitary body, of the thyroid gland, and perhaps of other glands, the testis and ovaries; that excessive sleep might be the result of excess of fatigue-products, or of a defective secretion from the glands, the latter position being illustrated by acromegaly, by myxœdema, by the menopause in some women, and by some rare cases of obesity and sleepiness combined. Dr. Taylor recorded an instance of extreme somnolence in a case of acromegaly complicated towards the end with albuminuria, but pointed out that drowsiness was not constant in acromegaly, and that insomnia was sometimes present. From the therapeutical point of view it was remarkable how few drugs we possessed for preventing sleep or directly curing drowsiness. Of the drugs used in opium poisoning —viz., potassium permanganate, atropine, and coffee—only the last was antihypnotic. They were thus confined, in cases of drowsiness, to the attempted removal of the cause, if this could be recognised. Vaso-dilators had not proved very successful. Working upon Dr. Salmon's hypothesis, one might try pituitary or thyroid extracts, but the cases were rare, and one could scarcely speak with confidence of the results until more experience had been acquired.

The vote of thanks to the lecturer was proposed by Dr. T. B. HYSLOP and seconded by Dr. A. P. GIBBONS, and supported by Dr. ANDREW CURRIE.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society was held on Oct. 4th, Dr. A. FREELAND FERGUS, the President, being in the chair.

Professor ROBERT KENNEDY showed: 1. A child, aged 4 years, who when 2 months old was operated on for a Birth Paralysis affecting the whole of the left arm. The lesion found was a band of cicatricial tissue encircling the junction of the fifth and sixth trunks of the brachial plexus. Function was now very largely restored. 2. A man, aged 30, in whom a Dislocation of the Left Shoulder, in December, 1911, was followed by Paralysis of the Arm. At the operation in April, 1912, the trunks of the brachial plexus were freed from cicatricial adhesions. Function was now practically normal, and the arm, which had been much wasted, measured only slightly less than the other. 3. A man, aged 32, who in November, 1911, had sustained a Fracture of the Vault of the Skull on the left side, followed by paralysis of the right arm. In June, 1912, a cicatrix and some spicules of bone were removed from the cerebral cortex, and within 24 hours power of voluntary movement was restored. 4. A child, aged 7, who from the age of 1 year had suffered from Paralysis of the Right Leg and Foot resulting from an acute anterior poliomyelitis. The operation of tendon-grafting, performed in May, 1912, had given the child a perfectly satisfactory limb.

Professor W. K. HUNTER showed: 1. A woman, aged 39, suffering from Sclerodermia with Calcareous Deposits in the Subcutaneous Tissues of the Fingers. The illness began at the age of 14, with phenomena of Raynaud's disease. When 18 she had pains in the joints and began to suffer from tightness of the skin of the fingers. Three years later nodules appeared about the finger-joints, some of which broke down, exposing calcareous material. The hands and feet, face, arms, and gluteal regions were the parts affected by the sclerodermia. Treatment by injections of fibrolysin for the past two months appeared to be doing good. 2. Blood films from a case of Infantile Splenic Leukæmia. The patient, a girl aged 2½ years, died in Glasgow Royal Infirmary after an illness of about 10 months' duration, characterised by gastro-intestinal disturbances, anæmia, epistaxis, and marked enlargement of liver and spleen. Blood examination a few days before death showed hæmoglobin, 30 per cent.; red blood corpuscles, 1,460,000; white blood corpuscles, 4400 per c.mm. A differential leucocyte count showed 13 per cent. polynuclears, 5·5 per cent. large lymphocytes and transitionals, and 81·5 per cent. small lymphocytes.

Mr. G. H. EDINGTON described two cases of Spina Bifida presenting unusual features. 1. A female infant, aged 4 months, with large cervical "meningeal lipoma" in the deeper part of which was felt a moveable piece of bone. A skiagram confirmed this, and showed defective closure of the neural arches of the second and third cervical vertebræ. There was at operation no bulging of the meninges, which were plainly seen through the gap in the bones. 2. A female, aged 4 months, with very large meningo-myelocele forming a cystic swelling over the right innominate bone. The lower limb was everted and held extended. On tapping 18½ oz. of cerebro-spinal fluid were withdrawn, and the finger detected a gap in the right laminæ of the lumbo-sacral region. Removal was followed by death within 24 hours. Post-mortem examination showed scoliosis of the lumbar spine, with concavity to the right. The sacrum was displaced forwards and upwards in front of the fifth lumbar vertebra, which projected into the spinal canal. The pelvic surface of the sacrum looked to the right. The left laminæ were well developed, but the right were rudimentary. The protrusion had occurred beneath the gluteus maximus, stretching the muscle and accounting for the position of the lower limb.

UNITED SERVICES MEDICAL SOCIETY.

President's Address.—The Evacuation of Sick and Wounded in the Territorial Force.

A MEETING of this society was held at the Royal Army Medical College on Oct. 9th, when the President, Fleet-Surgeon P. W. BASSETT-SMITH, C.B., R.N., delivered an introductory address to a large number of members present.

After referring to the rapid growth of the society and the formation of a new local branch at Portsmouth, the President spoke of the recent foundation of a new school for Naval Medical Officers at Greenwich, remarking that the Navy was indebted to Sir William Leishman, a distinguished teacher in the Royal Army Medical College, for assistance in planning the laboratories of this new institution. He then proceeded briefly to consider the evolution and growth of the Naval Medical Service, which from the time of Henry VIII. has progressed in efficiency and in importance. In the reign of Charles I. the naval surgeons apparently laboured under the disadvantage of not being supplied with either stores or drugs, but under the Commonwealth a great improvement

was manifest, even hospital ships being used by the navy at this time, since when steady preparation for all emergencies likely to occur in either peace or war has been going on, the advance having been especially rapid in recent years.

Captain C. R. SYLVESTER BRADLEY, R.A.M.C., read a paper on the Evacuation of Sick and Wounded in the Territorial Force. He pointed out that while the field ambulances of the Territorial Force are very efficient, there is little or no organisation for medical services on the "line of communication." The following units which exist in the Regular Army are not present in the Territorial Force in any form: (*a*) Clearing hospitals; (*b*) stationary hospitals; (*c*) ambulance trains; (*d*) convalescent depôts; and (*e*) medical store depôts. It is therefore left solely to voluntary aid to supply the deficiency. The general hospital is the only line of communication unit existing in the Territorial Force, and the peace establishment of this unit, so far as concerns rank and file, is 66 short of its establishment for war. Captain Sylvester Bradley considers that the peace establishment of the general hospitals should be raised to war strength. The clearing hospital being the point on which the evacuation of sick and wounded would turn on active service, it appears urgently necessary that this unit should be organised and, as far as possible, trained in times of peace. The commanding officer should preferably be a retired Royal Army Medical Corps officer, and should be given ample facilities for seeing and training his unit *before* mobilisation. The names of the remaining medical officers should be registered, as is done for the general hospitals. The remaining *personnel* must be provided from voluntary aid detachments, but these men should also be registered in peace time, and facilities should be afforded for training the unit with the Territorial Field Ambulances at their annual training. Rank would seem to be necessary for the *personnel*, as it will be no easy task to maintain discipline in clearing hospitals full of sick and wounded soldiers. For this reason, it would be well to embody the rank and file as reservists of the Royal Army Medical Corps Territorial Force. Transport—such as motor cars and motor 'buses—should also be registered in peace time, and use should be made of canals and rivers for the carrying of sick and wounded. Stationary hospitals need not be so large as in the regular forces, as the general hospitals will never be very far from the fighting line. Small temporary hospitals should, however, be formed from voluntary aid detachments with a rôle similar to that of the stationary hospital of the expeditionary force. Ambulance trains, convalescent depôts, and medical store depôts all require organisation in times of peace if they are to be of practical value on mobilisation. Captain Sylvester Bradley summed up his recommendations as follows: (1) Voluntary aid needs to be raised and administered on a divisional basis; (2) clearing hospitals require to be formed and trained in peace-time; (3) a Royal Army Medical Corps officer is needed in each division to supervise the training of lines of communication medical units; and (4) the provision and renewal of medical stores for Territorial Force units should not be left until mobilisation has occurred, but should be collected in peace time, on some such system as a divisional medical store depôt.—An interesting discussion followed in which Surgeon-General Sir LAUNCELOT GUBBINS, K.C.B., Lieutenant-Colonel B. M. SKINNER, M.V.O., R.A.M.C., Lieutenant-Colonel J. HARPER, R.A.M.C. (T.F.), Major E. B. WAGGETT, R.A.M.C. (T.F.), and Lieutenant-Colonel BERTRAM SOLTAU, R.A.M.C. (T.F.), took part.

The proceedings terminated with an exhibition of a new form of Cooking Apparatus, the "Econocooker," apparently well adapted to the needs of medical units on active service, by M. Emile Kiechte, its inventor.

THE Calais-Mediterranean Express, the winter train *de luxe* of the Sleeping-car and International Express Trains Company, will run daily from Calais to the Riviera, commencing on Monday, Nov. 11th, throughout the season. It will be composed exclusively of sleeping- and restaurant-cars and will run in connexion with the 11 A.M. train from Victoria (South-Eastern and Chatham Railway), the Riviera being reached in 22 hours without change of cars from Calais. This is, we understand, the first time that the Calais-Mediterranean Express has been run on a daily service, and medical men may find the information useful.

Reviews and Notices of Books.

A System of Medicine by Many Writers. Edited by Sir CLIFFORD ALLBUTT, K.C.B., M.A., M.D. Cantab., Regius Professor of Physic in the University of Cambridge, Fellow of Gonville and Caius College; and HUMPHRY DAVY ROLLESTON, M.A., M.D. Cantab., F.R.C.P. Lond., Senior Physician, St. George's Hospital, Physician to the Victoria Hospital for Children. Volume IX.: *Diseases of the Skin and General Index.* London: Macmillan and Co., Limited. Pp. 869. Price 25*s.* net.

THE concluding volume of the new edition of this excellent System of Medicine is worthy of its predecessors. The editors of the system have had the assistance in the preparation of the volume of Dr. T. Colcott Fox, who has rewritten most of the articles contributed by the late Dr. J. F. Payne, and has provided a number of new articles. He has also contributed an introduction, in which he insists on the need for the special study of dermatology. The important subject of the bacteriology of the skin has been ably written by Dr. Arthur Whitfield, who has discussed what may be termed the bacteriology of the healthy skin, and has described the more important forms of microbic infection of the skin. He has also rewritten the articles on eczema and on tumours. Dr. J. H. Sequeira has completely rewritten the article on tuberculosis of the skin, and new articles on pruritus and on parapsoriasis have been contributed by Dr. J. M. H. MacLeod. There are several other new articles, among which those on sporotrichosis and blastomycosis, by Dr. H. G. Adamson, deserve mention.

The general level of the articles is very high, and from the position of the authors they may be said to be not merely the expression of the received opinions of the present time, but rather authoritative statements on dermatological matters, for in many cases the latest ideas which have not yet had time to find their way into the text-books are given. A comparison of some subjects in the earlier edition with the form in which it is treated in this issue will show at once the great advances that have been made.

Diagnose der Simulation Nervöser Symptome. Ein Lehrbuch für den Praktiker. Von Priv.-Doz. Dr. SIEGMUND ERBEN, in Wien. Mit 24 Textabbildungen und three Tafeln. Berlin und Wien: Urban und Schwarzenberg. 1912. Pp. 194. Price, paper, 7 marks; bound, 8.50 marks.

THE appearance of a book such as the one under review is a sign of the times. What with workmen's compensation and insurance, and industrial accidents and diseases, the position of the employer of labour has become no sinecure, and in view of the obvious temptations to simulation and malingering on the part of unsatisfied employees with which he is almost daily confronted, it behoves him to have at his disposal adequately expert medical opinion. It is well known that on the Continent the situation in this respect is sufficiently serious, so much so that a new neurosis has been discovered and christened the "fight-for-compensation neurosis" (Rentenkampfneurose). The general practitioner, who in the midst of arduous daily rounds may find it difficult to keep pace with the increase of medical knowledge, must nevertheless recognise that he cannot afford to ignore the calls on him for an accurate diagnosis between disease and the simulation of disease, and we therefore welcome the appearance of the present work, which is written especially for the practitioner of medicine.

It contains a thoroughly interesting and concise account of all sorts of clinical tests whereby to reach a fair diagnosis in neurasthenia, "nervosism," accident neuroses, and allied conditions; there are chapters on the special examination of

the heart, the eyes, the ears, the vasomotor system, the reflexes, and so forth; there are sections on the interpretation of such symptoms as anæsthesia, hyperæsthesia, pain in the back, in the legs, and so on; also of contractures, trembling, giddiness, faintness, and other conditions which can be described, but cannot easily be tested. The practising neurologist will here find not a little that is as valuable as it is novel; some at least of the tests described are little known in England, and are certainly not in common use.

We can cordially recommend the book to the general practitioner, and should like to see it in an English edition, for it is a real *multum in parvo*, and calculated to provide him with all that he requires in the examination of dubious cases, whatever be the system of the body apparently affected. There is a full table of contents and an adequate index. It may be mentioned, by the way, that we do not remember any volume in which the author is so prodigal of footnotes as the present one; they occur almost on every page.

Laboratory Methods, with Special Reference to the Needs of the General Practitioner. By B. G. R. WILLIAMS, M.D., Member of the Illinois State Medical Society. Assisted by E. G. C. WILLIAMS, M.D., formerly Pathologist, Traverse City, Michigan. With an Introduction by VICTOR C. VAUGHAN, M.D., LL.D., Professor of Hygiene and Physiological Chemistry, University of Michigan. With 40 engravings. London: Henry Kimpton; Glasgow: Alexander Stenhouse. 1912. Pp. 204. Price 10*s.* net.

ON the assumption that the general practitioner must be a specialist in all branches of medicine the authors provide instruction whereby he may himself make, easily and inexpensively, examinations on which he may depend without extensive apparatus and elaborate tests. They further assert that in the United States, in many cases, the comparatively simple cases that are usually sent to distant cities for expert examination may be examined with more satisfactory results by the practitioner himself.

After a chapter on General Considerations—much of which to us seems unnecessary—we find the following terms: "Microscopic Hysteria," "A Bacteriological Laboratory for Five Dollars," "Urinalysis." Then is given in succession a chapter on each of the following subjects: sputum, searching for germs, "vascular dramas," chemistry and biology of the gastric juice, essence of tissue diagnosis, detection of common poisons, exudates, diazo *versus* Widal, urine in disease, milk and its home modifications, simple water analysis, every-day stool tests, technique of the private post-mortem, to find the treponema in six minutes, laboratory prophylaxis, indications for laboratory aids, and general information. The last chapter deals with stains, reagents, and other chemicals, and weights and measures, English measures being used throughout. Where possible at the head of each chapter a list of the apparatus required for the work therein described is given, and there are several full-page illustrations showing the arrangement of the simple apparatus for special investigations. The directions for the examination of the sputum are such as every student in this country learns in his pathological course. In "searching for germs" there is still a considerable list which "the practitioner may wisely avoid working with," and which should be "left to experts"—e.g., colon, typhoid and paratyphoid, dysentery, and tetanus bacilli, germs of food poisonings, plague and anthrax bacillus.

The odd title, "Vascular Dramas," in which the authors include what they call "blood analyses," is chosen for convenience of description, because they consider each blood picture a "drama," the circulatory system the "stage," and the red bone marrow the "back of the scenes." The authors describe a simple method of their own for blood counts (p. 61). Here again a list of tests "seldom or never attempted by the practitioner" is added, and, of course, these exceptions definitely limit the scope of the work. Under "Essence of Tissue Diagnosis" elementary details for freezing, preparing, and cutting microscopical sections by various methods are given. The reader may best judge of the efficiency of the tests set out for detection of the common poisons from the statement that there "are described only the good tests, which are usually the simple ones; with a view of limiting the expense, the selections of tests have been made in such a manner that one reagent may be available for detection of several different drugs." As to "Diazo *versus* Widal," the authors remark that "it is probable that many of the recommendations would hardly find favour with hospitals or college clinics."

The book is, as will be gathered, a brave attempt, and displays both ingenuity and originality. It is written to meet the case in America, where the general practitioner has no need to carry out at least some of the methods described. The practitioner who desires to do personally as much as possible of his analytical work will find what he mostly requires in these "Laboratory Methods."

Die Morphologie der Missbildungen des Menschen und der Tiere. Herausgegeben von Dr. ERNST SCHWALBE, o.ö. Professor der Pathologie und Pathologischen Anatomie an der Universität Rostock. III. Teil. *Die Einzelmissbildungen.* IV. Lieferung. *Die Missbildungen des Gebisses.* Von H. PECKERT. 1911. Pp. 505–564. Price 2 marks. [The fifth and sixth sections were reviewed in THE LANCET of July 13th, 1912, and Oct. 28th, 1911, respectively.] VII. Lieferung. *Die Missbildungen der Haut.* Von Professor Dr. BETTMANN, Heidelberg. 1912. Pp. 633–762. Price 4 marks. VIII. Lieferung. *Die Missbildungen der Athmungsorgane.* Von Dr. P. SCHNEIDER, Heidelberg. 1912. Pp. 763–857. Price 3.60 marks. Jena: Gustav Fischer.

THE fourth section of Professor Schwalbe's elaborate treatise on deformities deals with the malformations of the teeth and jaws. First, alterations in the number of teeth are considered, then anomalies in the form and position of individual teeth; a chapter on conjoined teeth follows, of which the most remarkable variety is the formation of one tooth within the pulp cavity of another tooth. A chapter on odontomes follows, and one on malformations of the jaws concludes the work. This Lieferung is an excellent piece of work.

In Lieferung VII. the author, admitting the difficulty of defining the term "malformations" as applied to the skin, remarks that actually as regards the skin, instead of severe anomalies of the organ as a whole, we have to deal with limited disturbances which, so far as the function of the skin as a whole is concerned, affect it but slightly. Nearly 30 pages are given to nævi, and here, again, the author introduces and criticises the various definitions of such anomalies, which are all far from being of embryonic origin. Then follows an account of their minute structure and histopathology, the peculiarity of the situations where they occur, and the seats of predilection—such as the eyelid, nose, especially in the naso-labial folds, forehead, temples, lips, cheeks, and chin. Various combinations of cutaneous anomalies with anomalies of other organs are then considered, and a short account is given of the appearances of certain cutaneous affections in several generations of a family and speculation is added as to how they bear on Mendelism. Observations are also recorded in connexion with the cutaneous anomalies of animals. The greater part, however, is taken up with the special anomalies of the skin, such as hypoplasia, congenital cutaneous defects on the skull and other parts of the body, pseudoxanthoma, cutis

laxa or dermatolysis, elephantiasis congenita and Recklinghausen's disease, connective tissue tumours, affections of blood- and lymph-vessels, anomalies of pigmentation, keratinisation and the formation of horns, anomalies of the hair apparatus, including the sweat and sebaceous glands. To each of these subjects is added a very full account of the literature. Especially interesting are the remarks on the history of the cases cited on albinism, keratoma, ichthyosis, in relation to the problems of heredity. Unfortunately, there are no illustrations, but the text throughout is both interesting and comprehensive.

In Lieferung VIII. Dr. Schneider is also troubled about the limits of his subject, the malformations of the respiratory organs—he sometimes hardly knows where variations end and malformations begin. But it appears that the greater number of abnormalities of the lobes of the lung belong to variations from the normal, but a knowledge of them is essential for the understanding of the rarer anomalies. After a short account of the development of the respiratory organs the author treats of the total lack of the whole respiratory apparatus or large portions of the same, and the results of closure or obliteration of the respiratory tube. The malformations of the larynx, such as congenital atresia and stenosis of the larynx, anomalies of the ventricles, defects, ventricular cysts, abnormalities of the vocal cords, framework of the larynx, and post-embryonic anomalies of the larynx as a whole, are next considered. The defects of the trachea are dealt with much under the same heads—atresia, stenosis, diverticula, and framework. Changes in position and abnormalities of the connective tissue wall of the trachea are represented by intra-tracheal and laryngeal struma, and multiple osteochondromata, with a short notice of tracheal fistulæ and tracheoceles. Under bronchi and lungs we have agenesia (with an excellent illustration) and extensive hypoplasia of one lung, of the lungs or parts of them, abnormalities of the lobes of the lung and their structure, with variations of the bronchi and their arteries, the azygos or Wrisberg's lobes, abnormal folds and malformations of the pleura, accessory lungs, tumours, congenital hernia of the lungs, and a short appendix on the respiratory organs in certain cases of monstrosities brings an excellent compendium to a close. The illustrations here add greatly to the value of the text and the extensive literature.

Syphilis from the Modern Standpoint. By JAMES MCINTOSH, M.D. Aberd., Grocers' Research Scholar; and PAUL FILDES, M.B., B.C. Cantab. Illustrated. London: Edward Arnold. Price 10*s.* 6*d.* net.

THIS is a volume of a new series called the International Medical Monographs. The object of this book is, the authors tell us, to collect into one systematic whole the various remarkable advances that have been made in the domain of syphilis within the last few years, and the book has been written mainly from the pathological standpoint, but, when possible, conclusions likely to be of interest to the clinician have been drawn. The authors urge that more care should be taken in hospitals and medical schools to teach the subject of syphilis, and they suggest that acute secondary cases should be admitted into general hospitals, so that they could be studied more thoroughly and that students might learn more about the disease.

The book begins with a short history, and the authors are inclined to think that syphilis was introduced into Europe from America, but they agree that this cannot be considered as fully proved. Then follows a very full account of the spirochæta pallida and the mode of demonstrating it. On the whole, they approve of the dark-ground method, but they think that by the Indian ink method it is not possible to distinguish between the different kind of spirochætæ, for the apparent width of the spirochæte varies according to the thickness of the film, great distortion occurs, and the motility which is of so much importance in diagnosis is absent. The chapter on the pathogenicity of the spirochæta pallida is of much interest, and an account is given of the history of the attempts to inoculate animals with it, and the variations in the length of the incubation period in various animals are mentioned. On the question of the value of excision of the primary sore, an operation which was at one time advised in order to prevent general infection, the authors point out that unless this excision is done within 12 hours of infection, invasion of the neighbouring tissues has occurred. Then follows a chapter on the histo-pathology of syphilitic tissues. The question of natural and acquired immunity is discussed, and the important subject of the Wassermann reaction dealt with. The principle of demonstrating the presence of specific immune substances in a serum by "fixation of the complement" was devised by Bordet and Gengou, but Wassermann, Neisser, and Bruck applied it to syphilis. As to the explanation of the Wassermann reaction, the authors are inclined to favour the theory that it depends on a physico-chemical reaction between substances in the serum and lipoids in the antigen, resulting in an alteration in the mixture, so that it can absorb complement. The technique of the reaction is discussed, and the main modifications that have been employed are described. One chapter deals with the clinical value of the Wassermann reaction, both for diagnosis and for treatment. An account is then given of "606," with the modes of administration. The after-effects of the drug are also considered.

We have formed a high opinion of the book, and think that it will prove of great value to workers in this department; but the authors appear to us to be somewhat contemptuous of "clinicians." What may happen in the future none can tell, but for the present at least clinicians have their use.

A Text-book of Gynecology. By WILLIAM SISSON GARDNER, M.D., Professor of Gynecology, College of Physicians and Surgeons, Baltimore. With 138 illustrations. London and New York: D. Appleton and Co. 1912. Pp. 286. Price 12*s.* 6*d.* net.

IN preparing this volume the author has taken into consideration the limited time of the medical student, and he has stated his facts briefly and has attempted to put them clearly. The greatest amount of space is devoted to diseases that are common and with which it is essential that the student should be familiar. In these conditions, naturally the various diseases can be considered only somewhat briefly. In the section on dysmenorrhœa, we notice that the author attributes membranous dysmenorrhœa to infection of the uterus. It is difficult to believe that this can be the explanation of many of the cases. In discussing the treatment of a case of imperforate hymen, no mention is made of the advisability of an abdominal section in cases in which the tubes are distended. A urethrocele is defined as a circular dilatation of the urethra that is usually due to a narrowing of the meatus. Whatever the exact nature of a urethrocele or urethral diverticulum may be, and there is certainly some difference of opinion, the form described by the author must be very rare indeed. In the treatment of prolapse of the uterus, Professor Gardner recommends Wertheim's operation of intravaginal fixation. He does not, however, apparently approve of the extended abdominal operation for carcinoma of the cervix, and believes that the high operative mortality more than counterbalances the permanent recoveries secured by the removal of the pelvic glands; but surely he takes an incorrect view of the main advantages of Wertheim's operation, since Wertheim only removes

definitely enlarged glands and yet strongly advocates his operation because it permits of a more extensive removal of the growth with less risk of damage to the surrounding structures and with greater surgical precision. The micro-photograph on p. 129, of an erosion of the cervix with an absence of epithelium on the surface, must surely have been taken from a badly preserved specimen. It is misleading, since the typical character of an erosion is due to the exposure of the cylindrical epithelium by the separation of the squamous epithelium which normally covers the vaginal portion of the cervix. If the epithelium is entirely absent the condition is not that of a true erosion. In performing the operation of subtotal hysterectomy, does the author always remove both the ovaries as the illustrations given seem to show? Nothing is said as to the value of preserving one or both ovaries, so we must suppose he does. It is obvious that there is much in this book not in accord with current English teaching, and it is not, therefore, a text-book that we can recommend to students in this country.

Thérapeutique Chirurgicale et Chirurgie Journalière. Par G. PHOCAS, Professeur de Clinique Chirurgicale à la Faculté de Médecine d'Athènes, Ancien Professeur Agrégé de la Faculté de Médecine de Lille; et J. BAROZZI, Ancien Interne des Hôpitaux de Paris. Deuxième edition, avec 630 figures dans le texte. Paris: Vigot Frères. 1912. Pp. 1176. Price 16 francs.

SOME years ago Professor Phocas published the first edition of this work in a series of manuals of clinical treatment. These have been out of print for a long time, and the new edition has been rewritten with the assistance of Dr. Barozzi, but the aim of the book has not been altered. It is intended to provide a guide for the general practitioner who wishes for information on some surgical point, such as the indications for some operation and the method of carrying it out; especially is it intended to provide him with the knowledge necessary for performing that amount of surgery which will come to him in his work day by day. Little attention is given to merely theoretical considerations, but the practical object of the book is always kept in view by the authors. A very useful section is that devoted to gynæcological surgery, and this occupies nearly 200 pages. Students, also, will find this work very useful. The book is well printed and bound.

A System of Clinical Medicine, dealing with the Diagnosis, Prognosis, and Treatment of Disease, for Students and Practitioners. By THOMAS DIXON SAVILL, M.D. Lond. Third edition, thoroughly revised. London: Edward Arnold. 1912. Pp. 942. Price 25*s.* net.

IN our notices of the previous editions of the late Dr. Savill's book on clinical medicine we have commented upon its original and practical character. The appearance of a third edition indicates that its merits are duly appreciated and that it serves a useful purpose. We learn from Mrs. Savill's preface that the arrangement and scheme of the book have been in no way altered, but that it has been carefully revised, much new matter being added. Among the conditions of which descriptions are now included we may mention acute pulmonary œdema, of which a brief but clear account is given. It is stated that the best emergency treatment is blood-letting and that atropine and belladonna have an almost specific action. Family acholuric jaundice is also referred to, a short description of its chief clinical characteristics being given. Among the anæmias, following the account of pernicious anæmia, the condition of aplastic anæmia is also shortly described. Other conditions, the accounts of which are new in the present edition, are Hirschsprung's disease, the serum disease, multiple myeloma and other rare bone diseases, adrenalitis, Rocky Mountain fever, Japanese river fever, rat-bite fever, psittacosis, ochronosis, enterogenous cyanosis, amyotonia congenita, family periodic paralysis, and atrophic spinal paralysis of infants. We have referred to each of these and found that the details given, though brief, comprise the essentials of what is known. In order to render the book as trustworthy as possible Mrs. Savill has called in the assistance of experts in several departments, and to these she expresses her indebtedness in her preface.

Dr. Savill's book fully justifies its title of "A System of Clinical Medicine," since its aims are to facilitate the clinical study of disease, to assist in diagnosis, and to indicate the general lines of treatment. The new edition has been carefully revised, and remains as a notable contribution to the text-books of medicine and a worthy memorial of its talented and lamented author.

Maladies des Cœur. By Dr. J. CASTAIGNE and Dr. C. ESMEIN. Paris: A. Poinat. 1912. Pp. 292. Price 5 francs.

THIS volume forms one of the series known as "Le Série du Médecin." Following the plan generally adopted throughout the series, diseases of the heart are considered mainly from the view of diagnosis and treatment. The work is thoroughly up to date, and the various cardiac affections are considered in accordance with the latest physiological and pathological standpoints, stress being laid on the practical deductions which may be derived from theoretical discussions. Hence, irregularity of rhythm occupies a prominent place, and the action of the nervous mechanism of the heart in producing certain symptoms is duly explained.

A considerable amount of space is devoted to a description of the methods employed in examining the heart, not only by the routine methods of auscultation and percussion, but also by means of the mechanical appliances which have recently attracted so much attention. The use of the orthodiagraph is discussed at some length, and the authors consider that its employment affords valuable aid in the diagnosis of "latent mitral stenosis." Some interesting remarks are made on the estimation of the arterial and venous pressure. The electrocardiograph is duly described, but after reviewing the results obtained by various observers, especially by Einthoven, Dr. Castaigne and Dr. Esmein, while concluding that this method of examination is highly interesting from a theoretical point of view, is full of promise, and already fruitful in its application, hold that its introduction into practical medicine is too recent for its future sphere of action in this science to be definitely determined. The portion of the volume which deals with treatment is well worthy of study. The eminently practical character of the remarks encourages perusal, and much useful information and many valuable suggestions will thus be derived.

We can recommend this work as a good practical manual on diseases of the heart.

LIBRARY TABLE.

Cerebral Decompression in Ordinary Practice: An Address. By CHARLES A. BALLANCE, M.S. Lond., F.R.C.S. Eng. London: Macmillan and Co. Pp. 71. Price 2*s.* 6*d.*—This publication contains the substance of an address delivered with lantern illustrations at a meeting of the Bath and Bristol Branch of the British Medical Association on Feb. 28th, 1912. Mr. Ballance may be congratulated on his clear enunciation of the various conditions, arising either from accident or disease, when decompression by craniectomy may be advisable. He illustrates these conditions by concise particulars of a number of his own operations, including therein a relation not only of his successes but of his failures. His arguments for its trial in selected cases of apoplexy are

strong. When it is borne in mind that over 20,000 deaths from this cause occur annually in England and Wales, the importance of any suggestion for successfully dealing with this condition cannot be overlooked. The value of the operation for otitic meningitis was discussed in the Section of Otology at the recent meeting of the British Medical Association, being introduced by Dr. Milligan, of Manchester. It would appear that operations in the case of cerebral tumours are handicapped not only by the difficulties of localisation, but also by the still greater difficulties in diagnosing the nature of the tumour. In spite of this, Mr. Ballance makes out a good case for decompression as a palliative of impending blindness and other immediate consequences of increased cerebral pressure. The brochure contains some excellent illustrations, and is a valuable addition to the literature of brain surgery.

The Practical Medicine Series. Vol. II.: *General Surgery.* Edited by JOHN B. MURPHY, A.M., M.D., LL.D., Professor of Surgery in the Northwestern University, &c. Series 1912. Chicago: The Year Book Publishers. Pp. 616. Price $2.—We are glad to see this useful summary of the past year's surgery, and an examination of it shows that it is up to the average of previous years. It contains abstracts of all the most important articles published on surgery, but it might have been possible to condense them a little more. It might also be well if the editor were to indicate the fact when a process or method put forward as novel is really old. For instance, the use of water-glass as a casing for fractures is described as though new, whereas it has been employed for more than 30 years. However, these are but small blemishes, and they do not materially detract from the great value of this year book to all practising surgeons.

The Therapy of Syphilis: its Development and Present Position. By Dr. PAUL MULZER, of Berlin. Translated by A. NEWBOLD. London: Rebman, Limited. 1912. Pp. 248. Price 6*s.* net.—So recently as in THE LANCET of August 17th we noticed the appearance of the original German of this work, and we now welcome it in its English dress. Dr. Mulzer's book, which has a short preface by Professor Uhlenhuth, gives a slight but useful account of the various arsenical compounds which have been employed in the treatment of syphilis, and a fuller description of salvarsan. The technique of injection is described, and its effects in the various stages of syphilis are discussed. We have here in a handy form most of what the medical man will ordinarily wish to know about salvarsan. The translation has been effected with skill and judgment.

Massage and the Swedish Movements: their Application to Various Diseases of the Body. By KURRE W. OSTROM, from the Royal University of Upsala, Sweden. Seventh edition, revised and enlarged. With 115 illustrations. London: H. K. Lewis. 1912. Pp. 202. Price 3*s.* 6*d.* net.—Nine years have elapsed since we reviewed the fifth edition of Mr. Ostrom's useful little book, which has now reached its seventh edition. Since that period massage has been brought somewhat more (though not yet so much as could be desired) under the supervision of the medical profession in this country, a consummation which, it is only fair to say, Mr. Ostrom himself has been equally insistent on with ourselves. In the present edition the following new subjects have been added: neuritis, splanchnic neurasthenia, and infantile paralysis. Additions have also been made to the sections on diseases of the eye and ear.

Thirteen Years of a Busy Woman's Life. By Mrs. ALEC TWEEDIE. London: John Lane. 1912. Pp. 356. Price 15*s.* net.—Mrs. Alec Tweedie is the daughter of the late Dr. George Harley, F.R.S., who died some sixteen years ago, and who was well known in the medical profession and in the world of science. During her girlhood she met a great number of well-known medical men as well as persons of note in scientific and artistic circles. She married while young a grandson of Alexander Tweedie, a Fellow of the Royal Society, and a famous authority on fevers during the first half of the nineteenth century. Mrs. Tweedie accordingly enjoyed many opportunities of becoming personally known to the leaders of our calling, and this association with the profession of her father has always been maintained, and has even been accentuated as recently as this year, when she became Hospitality Honorary Secretary of the first International Congress of Eugenics. Consequently many of our readers may be expected to take an interest in the reminiscences of 13 years of her life as an author and journalist. The book is written in an intimate manner and at a continual high level of spirits, and incidentally introduces mention of a great number of distinguished persons with many of whom the author has been on more or less close terms of acquaintance.

MISCELLANEOUS VOLUMES.

WE have received almost simultaneously three books which deal with the social and marriage relations of the sexes, and each has its particular interest to-day. No one, we imagine, could fail to sympathise keenly with the unfortunate man or woman maritally bound for life to a consort incurably insane, whatever views he may hold, on either religious or other grounds, with regard to the ethics of legally dissolving such unions. In France the subject has attracted special attention, and its introduction in August, 1910, at the Twentieth Congress of French Alienists and Neurologists speedily resulted in the introduction of Bills into the Chamber of Deputies. Dr. LUCIEN GRAUX, director of the *Gazette Médicale de Paris*, has collected in a little book (*Le Divorce des Aliénés.* Paris: A. Maloine. 1912. Pp. 358. Price 4 francs) the correspondence instituted by him in that journal, which includes letters, not only from France, but from other countries, addressed to him by lawyers, medical men, legislators, and by other persons of experience qualifying them to express an opinion. In the preface Dr. Graux sums up and critically discusses the evidence and opinions presented. His own sentiments obviously lean towards a legal release for such of the unhappily situated individuals as desire it.——Quite an interesting volume is the second issue of the *Encyclopédie de l'Amour* (Paris: H. Daragon. 1912. Pp. 236. Price 6 francs), in which C. FRANCISCO PÉREZ treats of the subject as it relates to Spain. In the first part is a historical review of marriage and morals in that country, followed by an account of present conditions. The second part is an anthology of Spanish love poetry, ancient and modern, and a collection of extracts from Spanish and French writers. The third part treats of legendary lovers, and the fourth is a bibliography. The first volume of the series, by Christian Houel, dealt with Morocco. Subsequent volumes are to treat in similar fashion of the same subject in regard to Egypt, Turkey, England, Germany, Indo-China, Venezuela, and other countries.——The subject of *Legislation for the Protection of Women* is discussed by LORD CHARNWOOD [Mr. G. R. Benson] in a pamphlet bearing that title (London: P. S. King and Son. 1912. Pp. 20. Price 2*d.*). Lord Charnwood deals individually with several questions that have been put to him—affiliation orders, the "white-slave traffic," offences against children, and the suggested raising of the "age of consent" from 16 to 21—and incidentally discusses the more general question, whether the distinction now made between private vice and public crime is right, and whether the scope of State action for the repression or discouragement of vice could not be greatly enlarged. With regard to the question of a twofold moral standard for the man and the woman respectively, Lord Charnwood gives it as his opinion that "To say that chastity

outside the bond of wedlock is a duty for men as well as for women, is to state a plain, if hard, consequence of Christian morality, which we ought to accept without reserve. To say that unchastity in a man or in a woman should be regarded in quite the same way, is simply untrue, since their temptations are wholly unlike. It is no social convention or moral tradition, it is nature which inclines the one to seek what the other is normally inclined to shrink from; and no moral teaching or sentiment is quite honest or quite clean which does not take account of this fact. ..... There are some things which are positively noble in a woman, for which a man could claim no credit, since it would be a disgrace for him to be without them; there are some (and this is one) in which the converse is true."

Novel readers may be divided into two classes—those who demand rapid and continuous action, and those who prefer to traverse leisurely the expanses of contemplation, but appreciate a continuous motive with occasional stirring interludes in their reading. To the latter class *The Arkwrights, a Tale of Old Croydon*, by JOHN MORRISON HOBSON, M.D., B.Sc. Edin. (Croydon: *Guardian* Offices. 1912. Pp. 252, with 7 plates. Price 3*s*. 6*d*. net, or 3*s*. 9*d*. by post), will afford interest, especially if they have a taste for antiquarianism. The story treats of the fortunes of the stolen son of the Puritan London merchant, John Arkwright. It presents an interesting and accurate picture of the end of the sixteenth century, and especially of Archbishop Whitgift, while the history of Whitgift's Hospital at Croydon, which is still fulfilling its beneficent purpose, will incidentally be fairly known to the reader by the time he has finished the book. There are some interesting archæological notes, and the illustrations of the hospital are from Dr. Hobson's own photographs. Croydon folk especially should read the book, while the medical man will find in it a few points of professional interest. The book has the benediction of the Archbishop of Canterbury.

New Inventions.

TONSIL ENUCLEATOR.

AT the present time, when the operation for the enucleation of the tonsils is so much to the forefront and likely to be the only operation in the future, the question of the best instrument to employ to get a successful result in this operation is important. After considerable experiment with various patterns I have come to the conclusion that the simple instrument shown by the accompanying illustration is the best. The more slightly curved end of the instrument is the first made use of, its purpose being to draw back or perforate the thin anterior pillar of the palate, which is usually stretched over, and often firmly attached to, the enlarged or embedded tonsil. This blade is then swept round the upper pole of the tonsil and down its inner side, the posterior pillar being thus set free. Afterwards the enucleator is reversed, the more curved end being employed to dissect the attached mass, and finally enucleating the remaining lower portion of the tonsil. The dissecting ends of the instrument are not very sharp, and therefore are not dangerous to use, while the two curves are just sufficient in amplitude to effectively get round the parts that it is the purpose of the instrument to dissever. The body of the enucleator is roughened in order that a firm grip may be obtained, and it is just long enough to reach the recesses of the tonsillar fossa easily.

The enucleator has been made to my instruction by Messrs. Mayer and Meltzer of 71, Great Portland-street, W.

WM. STUART-LOW, F.R.C.S. Eng.

Harley-street, W.

AN ANÆSTHESIA-FINDER.

I HAVE designed a little instrument for facilitating the routine examination of cases of nervous disease. This anæsthesia-finder is for use in discovering and mapping out areas of cutaneous anæsthesia, hyperæsthesia, and so forth, for which purpose, for want of anything better, a pin or a nib is usually made to serve. One end of the instrument (which is lightly made) is pointed but blunt, for testing common sensation and provoking skin reflexes.

The other end, expanded and smooth, is used like the head of a pin for hyperæsthesia, and in addition is serrated to carry a pledget of wool for detecting the finer shades of tactile changes. Either end serves, according to the case, for investigating pain and pressure sensations. The instrument has proved of sufficient use in my hands to make me believe that it would be of use to others.

The anæsthesia-finder has been carefully made to my instructions by Messrs. Down Bros., Limited, St. Thomas's-street, London, S.E.

DAVID FORSYTH, M.D. Lond.

Wimpole-street, W.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF COUNCIL.

A QUARTERLY meeting of the Council was held on Oct. 10th, Sir RICKMAN J. GODLEE, the President, being in the chair.

The SECRETARY reported the death of Mr. Clinton Thomas Dent, Vice-President, and late member of the Court of Examiners.

The following resolution was passed:—

The Council hereby express their deep regret at the death of their colleague, Mr. Clinton Thomas Dent, whom they highly esteemed for the energy and ability which he displayed in all matters to which he put his hand, and whose judgment and keen interest in the affairs of the College they greatly appreciated. For these reasons, as well as for his attractive personality, the Council believe that his loss will be long felt and deeply regretted in the large circle of friends which his many interests and versatility gathered round him.

It was resolved that a copy of this resolution should be forwarded to his relatives, and that the sincere sympathy of the Council be expressed to them in their bereavement.

It was resolved that a special meeting of the Council should be held to elect a Vice-President in the place of the late Mr. Dent.

On the recommendation of the Museum Committee it was resolved that 15 crania of Dinkas from the Upper Nile and the skeleton of a boy illustrating the disease progeria should be purchased.

The death of John Marle, Articulator to the College, was reported. He had worked in the College for 47 years, having entered its service in 1865.

Sir ALFRED PEARCE GOULD, on behalf of the Committee on the Annual Report of the Council, submitted a draft copy of the Report to be presented to the Fellows and Members at the annual meeting on Thursday, Nov. 21st next. The report was approved and adopted.

The Council nominated Mr. Graham S. Wilson, late of Epsom College, as the twentieth Jenks Scholar.

Sir Alfred Pearce Gould was appointed a member of the Committee of Management in the place of Sir Henry Morris, Bart.

It was resolved to call on two Members of the College to show cause why their names should not be removed from the Roll of Members.

A letter was read from the University of Dublin, returning its cordial thanks to the College for sending a delegate and presenting an address of congratulation on the occasion of the celebration of the bicentenary of the Medical School of the University.

A CENTENARIAN.—Mrs. Mary Stockham, of Stogursey, Somerset, who celebrated her 100th birthday on August 24th last, died on Oct. 1st.

THE LANCET.

LONDON: SATURDAY, OCTOBER 19, 1912.

Crime and Punishment.

THE risk of error which is proverbially inherent in generalisations is nowhere more clearly evident and nowhere, perhaps, more serious in its consequences than in the study of sociological questions. It is, indeed, in the very nature of such questions that they come before the mind with an appearance of simplicity and definition which tends to disguise their real complexity, and this tendency is very commonly reinforced by the use in their discussion of collective terms which are apt to convey a misleading suggestion of homogeneity in essentially disparate facts. Influences of this kind have played and continue to play a very conspicuous part in the discussion of the problems of criminality; and it would hardly be an exaggeration to say that the whole history of penal reform is really the record of a struggle against such an influence arising from the deeply-rooted preconception which regards the "criminal" as a member of a class with constant and distinctive characters requiring to be dealt with by uniform methods. Even now, when a more enlightened view has become prevalent and when more rational systems of treatment are in vogue, the influence of this fallacious generalisation persists, and constitutes one of the most serious obstacles in the way of reform.

The extent to which such erroneous ideas interfere with the efforts to develop the principle of the individualisation of punishment and the progress which is being achieved in spite of these difficulties, are strikingly shown in the annual report of the Commissioners of Prisons for last year, which has just been published. It is pointed out in that report that of the total number of persons received into prison during the 12 months, 158,867 in all, no less than 128,539, or 81·1 per cent., were committed for periods of one month or under, sometimes for terms of three or five days. Considering the attention which has been given to the question of short sentences for many years past, it is certainly discouraging to find that magistrates still adhere to a system the futility of which should surely be obvious to common-sense, even if it had not been abundantly demonstrated by experience. It is true that in many cases the law does not offer any alternative punishment, but this is hardly a sufficient explanation of the fact, for it would appear that where the legislature has been at pains to provide more fitting methods there has been a deplorable neglect to take advantage of them. The failure of the Inebriates Acts is a notable instance of this remissness. And, as illustrating the same inability to accept new methods, the Commissioners' report draws attention to the persistent omission on the part of the courts to make use of the large powers of classification conferred upon them by the Prison Act of 1898. That measure provided that the committing court should be empowered in cases of less seriously criminal character to modify the conditions of imprisonment by placing the offender in the second division. So little notice, however, has been taken of this important section of the Act that during the past year, of the total number of prisoners who, having regard to the nature of their offences and to their personal antecedents, should have been eligible for this special treatment, only 3·22 per cent. were committed to this division. The Commissioners suggest, as a partial explanation of this very unsatisfactory attitude, that magistrates allow themselves to be unduly influenced by the terms of the stereotyped forms of commitment now generally in use, especially in courts of summary jurisdiction, and they recommend that the law should be altered so as to make it obligatory for the court in every case to pronounce in public the division in which a prisoner should be placed and to have the order to the same effect on the commitment form made in writing. This point, trivial as it may seem, is really of considerable moment, as it must tend to secure that the award of punishment shall be preceded by some degree of deliberate judgment of the character and disposition of the criminal. A reform of this kind should exercise an educative influence on the magisterial mind, and is, therefore, much to be desired, especially if, as will doubtless be the case, the same judicial authorities are in the near future to be entrusted with the power of committal to special institutions for feeble-minded criminals and to colonies for incorrigible vagrants. It will be of little avail that the legislature should pass enactments providing for the differential treatment of the various categories of the unfit if the magistrates refuse to make any use of the machinery at their disposal, and persist in regarding ordinary imprisonment as the one and only treatment for all delinquents and wastrels, irrespective of their character and mentality and the degree of their offence against society.

There is another reason why the public and formal allotment of the kind, as well as the amount, of punishment due to such offender is likely to be beneficial—it will tend to re-establish most usefully the association of disgrace with crime and imprisonment. For it is undoubtedly true that the recent bent of opinion with regard to the treatment of the criminal, admirable as it is in its repudiation of the stupid and brutal methods of the past, has in some measure weakened the sense of shame and degradation that ought to be, and used to be, associated with the penalty of prison. This is not only an evil in itself, but is also attended with the danger that the reaction to which it is likely to lead may prejudice the whole principle of reformatory treatment which is achieving such excellent results, notably in its application to the adolescent offender. Some hints of this danger may be detected in the criticisms, recently heard even from the judicial bench, to the effect that prisons are being made so comfortable that they put a premium on crime. And though it is, perhaps, a little difficult to accept the view, apparently entertained by some of these advocates of the policy of rigour and vigour, that the burglarious tendencies

of Mr. William Sykes are appreciably stimulated by a perusal of the programme of winter concerts at Dartmoor, or that his moral sense is further enfeebled by the inviting *ménus* of Wormwood Scrubbs, it is none the less true that an excess of sentiment with regard to the criminal may easily diminish the feeling of repulsion which the idea of crime and its consequences ought to arouse in a healthy community. POPE'S hackneyed lines may in this sense have an application to societies as well as to individuals. This danger would certainly tend to be minimised if the distinction between the different forms of legal penalty could be made more marked, and if more care were exercised by the administrators of the law in allotting punishment, so that the censure of the community on the ill-doer should be expressed by the sentence in a way proportionate to the gravity of his action and the degree of his responsibility. As it is, the almost automatic dispensation of terms of imprisonment for trivial infringements of the law is unfair to the delinquent and confuses opinion by obscuring what ought to be the normal relation between conduct and its consequences. From this point of view it is to be regretted that sentences of imprisonment are not reserved altogether for more serious crimes, penalties of a different order—such, for instance, as suspension of civic rights or a modification of the *corvée* in the form of a municipal labour-fine—being substituted in the case of petty offences.

Despite the many difficulties which impede the work of penal reform, it is very gratifying to know that much real progress is still being achieved on sound and rational lines. Thus the Commissioners are able to report that the Borstal system is proving more and more a conspicuous success, and they hold out the hope, which will be welcomed by all who have any knowledge of that depressing problem, that a wider extension may soon be given to the Borstal principle in dealing with "that large number of young female offenders who, under the present system, unchecked, and perhaps even encouraged, by a succession of short sentences of imprisonment, graduate slowly but surely into the class of habitual recidivism." This concentration of effort on the criminality of adolescence is an admirable proof that the administrators of our prisons are thoroughly in earnest in their task, and that the means at their disposal are being utilised to secure, at all events, whatever limited amount of success can be expected of any penal system.

The Work of Alexis Carrel.

THE award of the Nobel Prize to Dr. ALEXIS CARREL signifies that, in the opinion of men well able to judge, he has accomplished that which has already conferred benefit on the human race, and which in the future will confer still more. It must be confessed that in this country but little is known to the profession as a whole of what he has achieved and how far his exploits have been original departures. With the adoption of LISTER'S teaching the realm of surgery began to enlarge its borders and to invade regions previously utterly strange to it. Surgeons soon learned that they could treat bones and joints with a freedom from harm which was entirely new to their experience. A few more years elapsed, and then it was found that the abdomen could be opened with an almost absolute certainty that no harm would follow; that with careful asepsis the surgeon could deal with the organs of the abdomen almost as he dealt with the superficial structures. The thorax has yielded to the aseptic assaults of the surgeon, and the lungs, and even the heart, have borne witness to the versatility of surgical aid. The brain, though less easily conquered than many other organs, has been compelled to acknowledge the power of the surgeon, and, indeed, it seemed that the whole body had been brought under his sway. But the blood-vessels were still unsubdued. Before the advent of Listerism, even when the surgeon merely tied an artery, he could not be sure of the result, for until the ligature separated the operator was not sure that secondary hæmorrhage might not occur. It was with the greatest hesitation that we ventured to tie veins, for the very real fear of pyæmia restrained us. The operation for the cure of varicose veins was regarded as one of the greatest severity and risk. And even when the introduction of aseptic practice had dispelled the fear of secondary hæmorrhage and pyæmia, the danger of thrombosis occurring in the interior of the blood-vessel deterred the surgeon from venturing to deal with blood-vessels in any other way than by ligature. The first real advance in this matter, though indeed it was small, was made by the discovery that a puncture of a large vein, such as the internal jugular, did not necessitate the double ligature of the vein in its continuity; it sufficed that the wall of the vein immediately surrounding the puncture should be taken up by means of forceps and be included in a ligature. The wound always healed provided asepsis was preserved, and as no coagulation took place in the vein the continuity of the vessel was preserved.

This may be said to have been the state of the surgery of the blood-vessels when CARREL first began his investigations, which have gone far to revolutionise this branch of our work, and which, indeed, may almost be said to have created the surgery of the vascular system. The first point was to show that the wall of a vessel could be sutured without giving rise to coagulation in its interior; this had indeed been done years before, as we have mentioned, in the case of a puncture in the wall of a vein, but it was now demonstrated that an incision in the wall of an artery could be sutured while the continuity of the lumen of the vessel was preserved. So certainly has this been demonstrated, that it may be considered the standard treatment of an incised wound of a large artery to suture the wound and not to tie the vessel in its continuity. Soon CARREL showed that it was possible to make an end-to-end anastomosis of the cut ends of an artery or vein. Many had declared that sutures could not be employed in an artery. In 1903 there was a discussion at a surgical society, in the course of which it was proved that any such attempt to suture vessels was doomed to failure. One experimenter declared that from every suture-hole blood spurted at each beat of the heart, but this only proved that failures in vascular anastomosis can be readily due to a defective technique. The methods which have proved so successful in the surgery of other organs are too gross for the surgery of the blood-vessels. Even when CARREL

had succeeded in obtaining firm union of blood-vessels without any leaking at the points of suture, it was not at all rare for obliteration of the lumen to follow before long The first condition of success is a technique suited to the structures to be dealt with; the needles which suffice for the anastomosis of the bowel are far too large and clumsy to be used for the union of blood-vessels, and special needles have to be employed. As important, however, as the technique is perfect asepsis. For operations on the abdomen or elsewhere, so long as the wound does not suppurate the surgeon is accustomed to consider that the wound has been aseptic, though it is not improbable that some germs have been present; but in the surgery of the blood-vessels the most rigid asepsis must be preserved, for the slightest lapse will lead to thrombosis of the blood in the interior of the vessel, and the object of the operation will be defeated. At first CARREL often noticed that a wound might be perfect from the clinical point of view and yet that thrombosis might result, with obliteration of the lumen of the vessel; but with a still greater attention to the preservation of asepsis he has been able to obtain healing without any interference with the permeability of the vessel. Pains, infinite pains, led to this first success.

When the end-to-end anastomosis of both arteries and veins had been shown to be practicable several applications were made of it. A lost piece of an artery was replaced by a piece of another vessel, either an artery or a vein, and it was seen that the wall of a vein was quite capable of withstanding the extra pressure of arterial blood. A vein can be anastomosed with an artery, as in the now recognised operation of arterio-venous anastomosis for threatening or commencing gangrene of the leg in man, and this operation has met with a certain measure of success. As soon as anastomosis of vessels became certain the question of the possibility of transplanting organs arose, and CARREL has succeeded in transplanting from one animal to another of the same species several organs, and especially the kidney has been transplanted from one cat to another; the arteries and veins are transplanted at the same time and are anastomosed to the corresponding vessels, and it has been seen that as soon as the kidneys have been transplanted, and even before the whole of the operation has been concluded, the secretion of urine has begun. When it is required to transplant the renal artery, it has been found best not to cut the renal artery itself, but to cut out a patch of the aorta containing the renal artery, to insert it, and suture it into a corresponding hole in the aorta of the other animal; and the same operation is performed on the renal vein. There are certain difficulties in the way of the surgery of the vessels, but every year these are being overcome. As yet it must be confessed that in nearly all cases these operations have only been performed on the lower animals, but so far as they have been tried in human beings they have proved successful. And there is a further advance in the surgery of the blood-vessels which is perhaps even more surprising. CARREL has shown that a portion of artery may be preserved in cold storage for several days or even weeks before transplantation, and yet it will live. Nay more, although as a rule the tissue of one animal will not grow in the body of an animal of a different species, yet CARREL has found that these portions of blood-vessels of dogs can be transplanted from cold storage with success into the bodies of cats. None who have followed with interest these new advances in surgery can doubt that they contain immense possibilities, and the application to man of the methods learned in animals cannot be long delayed. What are the limits of the surgery of the vascular system no one can say, but at least it is clear that the Nobel trustees have done well to recognise the work of ALEXIS CARREL.

The National Insurance Act.

THE position remains unaltered, and the medical profession can only watch events with the resolution not to take service under the Act until they have the full information before them necessary to enable them to estimate the measure of their risk, but we trust also with no predetermination to boycott the measure before its full possibilities have been gauged. Those who have already decided that no offer can be made to them which will induce them to serve need not be the only persons who are now occupied in perfecting the organisation of the Public Medical Service to be placed at the disposal of insured persons by the British Medical Association in lieu of the Government scheme. Everyone should be prepared for a struggle, if a struggle must come. There are four alternative methods of providing a Public Medical Service before the profession, in addition to the five plans contained in the official Regulations. The model public service schemes of the British Medical Association comprise a scheme based on a capitation system of payment (Scheme A), and one based on a system of payment by attendance (Scheme B). In each of these the control of the service is absolutely in the hands of the medical men concerned. A third scheme (Scheme C) has now been published in a supplement to the *British Medical Journal*, based upon a payment per attendance system. This scheme proposes to provide medical attendance and treatment for persons insured under the National Insurance Act, as well as for persons not so insured, and is to be worked by the members of the local medical profession in coöperation with the subscribers, who will undergo a test of eligibility and will not be in receipt of more than £2 per week. To this scheme an amended version has been supplied (Scheme D) by Dr. H. D. LEDWARD, of Letchworth, the gist of the proposal being the transference of the insurance risk from the medical profession to the beneficiaries by an ingenious but quite feasible financial arrangement. The State Sickness Insurance Committee of the British Medical Association have directed the publication of the last two schemes without comment, and find that the principle underlying them—namely, coöperation between the medical profession and the approved societies—is one which is new as applied to a public medical service. The principle is not in the least new in the minds of many of us, even though no public medical service relying upon it has hitherto seen daylight, and we hope cordially that Dr. LEDWARD'S suggestions will receive full attention at the forthcoming Special Meeting of Representatives.

The practical difficulties that have arisen through the issue of the Provisional Medical Regulations with the matter of medical remuneration still unsettled are well illustrated by the inability of Mr. MASTERMAN, the Financial Secretary to the Treasury, to give any reply to a practical question in the House of Commons concerning the interpretation of the Regulations. Mr. LANSBURY'S pertinent inquiry as to the remuneration of a medical man working under the Act, in the case where the available funds are depleted by an epidemic, had to remain unsatisfied, nor does it seem likely that the House will have any opportunity, such as the Member for Bow and Bromley desired, to discuss the point. The Chancellor of the Exchequer, as must have been generally expected, has not been able to fall in with the suggestion made in our columns last week by Sir NORVAL HELME, that a Select Committee should be appointed to take evidence and report to the House on what should be the adequate remuneration for medical men working under the Act. Time does not allow for the making now of an investigation that should have been undertaken before the introduction of the measure. The intention of the Government with regard to the whole matter of the remuneration of the medical profession may be stated by the Chancellor of the Exchequer at any moment, but the right time for that statement has long gone by.

Annotations.

"Ne quid nimis."

THE DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

A BILL to amend Section 8 of the Medical Act of 1886 was introduced by Lord Morley in the House of Lords on Monday. The measure is intended to regulate the election of direct representatives of the medical profession upon the General Medical Council. The term of office of the direct representatives is five years, but when a vacancy occurs—death vacancies have been by no means infrequent—the new representative has until now held his seat for five years from the date of his election. In future it is proposed that all the direct representatives shall cease to hold office at the end of five years—the first date being Dec. 31st, 1916. The overlapping that will thus be prevented is at present a practical trouble and a possible source of expense to a by no means wealthy body. It is also proposed that in the last year of office it shall not be necessary to fill a vacancy, a certain number of elections thus being obviated. The time for holding an election is extended by the Bill from 21 to 40 days.

"MENTALLY EXCEPTIONAL" CHILDREN.

IN a little brochure[1] of 34 pages Professor Ziehen, who is Director of the Royal Psychiatric and Nerve Clinic in Berlin, raises a plea for the special education of that considerable class of children who, without being imbeciles, weak-minded, nor mental defectives, must be classified as mentally exceptional, or, as Professor Ziehen prefers to call them, constitutionally psychopathic. These handicapped children are, as a rule, thoroughly misunderstood; they are neglected or wrongly educated, and finding themselves jettisoned by society, help to swell the ranks of crime, prostitution, or vagabondage. The author submits three questions for the thoughtful to consider. First he asks whether anything can be done to ameliorate the lot of such children; secondly, what are the means, if any; and thirdly, whether such salvage work is economically sound. To all these questions he gives an affirmative answer in the sense that by appropriate methods the majority of such children can be turned into useful citizens, and that the results well repay the expenditure. The case of the exceptional child has within the last few years attracted considerable attention in England, and Dr. James Kerr, in his capacity of medical officer to the educational department of the London County Council, repeatedly drew attention to the desirability of grading and segregating children of abnormal mentality. In America there is a new society known as the National Association for the Study and Education of Exceptional Children, and the proceedings of its annual conference are well worth reading side by side with this admirable monograph of Dr. Ziehen.

[1] Die Erkennung der Psychopathischen Konstitutionen. By Professor Dr. T. Ziehen. Berlin: S. Karger. 1912. Pp. 34. Price 80 pfennigs.

NATURE-STUDY ABOVE THE SNOW-LINE.

"THE 'Third Italy,'" writes an Italian correspondent, "in contradistinction to the 'First' (or Pagan) and to the 'Second' (or Mediæval) Italy, can boast of few better claims to her reabsorption into the State-system of Europe than the revival of the nature-study in which she once bore an honoured part. At more than double the altitude of Ben Nevis she possesses on the Monte Rosa an observatory for physico-meteorological research which comprises three different stations: the principal one at Alagna Valsesia, 1200 metres above sea-level; an intermediate one at an altitude of 3000 metres, forming part of the International Institute for Nature-study established by the late Professor Mosso, of Turin, near the Colle d'Olen; and finally a third station on one of the most elevated peaks of the Monte Rosa, at 4560 metres above sea level. This latter derives its name from its munificent patroness the Dowager Queen Margherita, who takes a keen interest in its official staff and work—an interest, moreover, shared by another nature-student of the same royal house, the Duke of the Abruzzi. That intrepid explorer has just bestowed on the observatory the splendid assortment of meteorological instruments with which he conducted his researches on the heights of Ruwenzori and Karakorani (Himalayas), following up a previous gift of the same kind, that (to wit) of the scientific instruments which stood him in such effective stead during his cruise in the Arctic zone in the *Stella Polare*. Of more varied and even higher interest, however, are the equipment, the *personnel*, and the work of the Mosso Institute on the Colle d'Olen, reinforced as the institute was in 1907 by the new laboratories, to the erection of which other nationalities besides the Italian contributed—contributed, indeed, so handsomely as to entitle a select number of their nature-students to the accommodation, the resources, and the general facilities for observation and research provided. Their work, pursued with an energy all the more intense considering the few weeks of the summer available at a height so great and at a temperature so low, has just been completed, or suspended, for the season, and I am enabled by the courtesy of a Turinese friend to give a brief indication of its results, permanent or provisional. Professor Galeotti, of the University of Naples, with his assistant Dr. Signorelli, a distinguished pathologist of the Roman School, leads off with a series of experiments on the elimination of water by the lungs in repose and fatigue,

illustrating the apparatus possessed by the human organism for keeping up the said elimination in both conditions. Professor Parodi, of the Genoese medical faculty, contributes an elaborate study of the excretion of mydriatic substances from the suprarenal capsules, his findings having been obtained from ingenious, if painless, experiments on dogs, while Professor Guglianetti, of Naples, an expert in ophthalmic disease, illustrates with Schotz's apparatus the pressure of the globus ocularis. Following up the late Dr. Mosso's researches on the respiration, through the skin, under the influence of the climate and the life on the Monte Rosa, Professor Agazzotti, director of the Mosso Institute, aided by Dr. Viale, of the physiological laboratory of Turin, demonstrates the excess of chloride of sodium eliminated in those conditions, particularly on 'forced marches'—one experimenter having lost, on a special excursion, whether in perspiration or in watery vapour from the lungs, as much as 5·8 kilogrammes. So impoverished was the pedestrian's system as to the saline constituent that his subsequent appetite for savoury food to re-establish the systemic equilibrium proved something portentous. The foreign students this season included five from Germany and two from Hungary, making seven out of the total of 12 students, of whom five were Italians. Dr. Colnheim, of Heidelberg, and Dr. Laquer, of Frankfort, made a special study of the regeneration of the blood in dogs. The problem is of great importance, since its solution will answer the question whether an anæmic organism can regenerate the red corpuscles and the hæmoglobin more rapidly on a high mountain than on the plain. Pending the publication of their findings, I am in a position to report these as affirmative. Dr. Dember, of Dresden, is completing his researches into the 'emission of the ultra-violet rays of the sun,' researches better prosecuted at high altitudes than on the plain, for which, however, he awaits steadier weather, at the Capanna Margherita. Dr. Stremmer, of Berlin, with his wife, a 'doctoress' in geology, has been working at his favourite subject, the transformations wrought upon rocks and stones under the influence of the air, the sun, and the storms of Alpine regions; and finally, 'Doctoress' Mariska Pell and 'Doctoress' Abuska, both of Budapest, have made minute and interesting investigations on the animalcules frequenting the tarns near the institute on the Colle d'Olen. The season's record will compare not unfavourably with the best of recent years, all the more as the weather has been abnormally bad and the temperature very low."

THE METROPOLITAN NURSING ASSOCIATION.

THE important work done by trained nurses in the homes of poor patients, often saving such patients from the workhouse infirmary, can only fully be appreciated by the medical man; the help which such nursing gives to the general practitioner may often mean the saving of the patient's life. The Metropolitan Nursing Association, which was founded in 1875 with the coöperation of Florence Nightingale, and which has among its objects the nursing of the sick poor in their own homes and the maintenance of a training school for district nurses, is in urgent need of funds owing to a large extent to the death of old supporters. The Lady Mayoress has consented to preside at a meeting at the Mansion House on Oct. 24th at 5.30 P.M. in its aid. Among the speakers will be Sir John Bland-Sutton, Mrs. J. M. E. Brownlow, Mr. Ernest Wild, K.C., and the Mayor of Holborn. The work of the nurses extends from east of St. Paul's Cathedral to Oxford-street, and from St. Pancras to the Thames Embankment in one direction, and Park-lane in another, and it should therefore receive the support of a large number of people to whom the subscriptions that would help the struggles of a hardworking executive committee would mean no real sacrifice. The address of the association is 23, Bloomsbury-square, W.C., where full information can be obtained from the superintendent, Miss Hadden, and donations and subscriptions will be gratefully received and acknowledged by Lady Kenyon, treasurer of the appeal committee, at the British Museum, W.C., who will also supply tickets of admission for the meeting at the Mansion House on Oct. 24th.

THE MORTALITY OF ALCOHOL.

WE have received a copy of a short essay[1] which describes itself as "a pioneer effort" to arrive at an approximation of the mortality due to consumption of alcohol by means of a study of the male adult mortality statistics of the United States for the year 1908. The author obtained from three medical men experienced in life assurance work their estimate of the proportions of male deaths occurring between the ages 20 to 74 inclusive, from 106 specified causes in the mortality returns, which were directly or indirectly due to alcohol. He then took the average of the three percentage estimates, and applied the figure so obtained to the number of male deaths recorded under each of these 106 headings, thus deducing the actual number of deaths due to this cause. The 106 diseases dealt with, which might in varying degrees of likelihood be attributable to alcohol, are divided into three categories. In the first are 28 headings, under which alcohol is considered to have been an important contributory, and sometimes the principal causative factor in the case of death. The second group contains 48 headings, under which alcohol may have been a minor contributory, or a distinctly disturbing factor. In the third class, the alcohol, though not a primary or secondary cause, may have been a harmful contributory factor. This includes 30 headings. A point that immediately strikes us on examining these tables is the wide diversity in the opinions of the three experienced assurance physicians. With regard to the heading "alcoholism," naturally each attributes 100 per cent. of the deaths to consumption of alcohol; but even in the first table we find such wide variation as, e.g., pneumonia, "lobar and unqualified," due to alcohol in 10 per cent. of cases in the opinion of Dr. X, while Dr. Y considers alcohol to be responsible in 30 per cent. of cases. Again, cirrhosis of liver is debited to alcohol in 90 per cent. of cases by Dr. Y, and by Dr. Z in only 30 per cent. Heat and sunstroke are due to alcohol in only 10 per cent. of cases according to Dr. X, while Dr. Y puts the percentage at 95. In the two other tables considerable variation of opinion is to be expected, as in scrofula (15 per cent. by one, 1 per cent. by another observer), general paralysis of the insane (40 per cent. and 1 per cent.), hæmorrhage from the lungs (25 per cent. and 1 per cent.), urinary calculi (30 per cent. and 1 per cent.). But when, as in this investigation, the author takes the three estimates, divides the sum of them by three, and applies this average to the mortality figure at his disposal, the whole value of such an "average of averages" depends on the equality of value of its component parts. Moreover, when there is such a wide diversity of opinion (as, e.g., between 25 per cent. and 1 per cent. in the attribution of pulmonary hæmorrhage to alcohol), it cannot be said that the arithmetical mean, 13 per cent., has much statistical value; it expresses the opinion of neither Dr. Y

[1] The Mortality of Alcohol: A Statistical Approximation of the Deaths in the United States in which Alcohol may Figure as a Causative or Contributory Factor. By E. B. Phelps, M.A., F.S.S. New York: Thrift Publishing Company. Pp. 75. Price $2.

nor Dr. Z. Even when averaged with Dr. X's 5 per cent., the resulting 10 per cent. is not a true average unless the three component parts were of equal magnitude. The author believes that, as the averages are so far removed from the extremes, the final results would not have been very different if the estimates of 300 physicians instead of three had been obtained. This is a pious opinion and nothing more. Where there is a wide divergence in a small series of observations, there is all the more necessity for taking a large series, if any trustworthy deduction as to the true average is to be obtained; as the old formula of Poisson shows clearly enough. The author's conclusion is that in the United States in 1908 the mortality due to alcohol, directly or indirectly, amounted to 66,000 deaths, or about 1 in every 13 deaths at adult ages, or 5·1 per cent. of the total mortality from all causes at all ages. Mr. Phelps gives useful summaries of previous investigations on the subject, but does not refer to Mr. R. M. Moore's valuable comparison between abstainers and non-abstainers in the United Kingdom Temperance and General Provident Institution in 1903. The admission that the essay is only the beginning of a systematic attempt to deal with a difficult matter makes further criticism inconvenient. We do not think that the work proves much, but we would not for worlds impede further study on what may become valuable lines. The subject is too vastly important.

CHEMICAL STRUCTURE AND PHARMACOLOGICAL ACTION.

ALTHOUGH the changes undergone by any substance within the animal body may differ from those which occur in a test-tube, and difficulties may thus arise in predicting its pharmacological properties, yet its effects must ultimately depend on its chemical composition; and the advance of chemical investigation is gradually leading to the elucidation of the problems of pharmaco-dynamics in relation to structural formulæ. In a recent paper which appeared in the September number of the *Bristol Medico-Chirurgical Journal* Dr. Oliver C. M. Davis shows how in certain chemical groups of bodies physiological effects are related to chemical structure and properties. For example, in the case of certain anilides or derivatives of aniline, which are slowly hydrolysed within the body with production of the amine and the acid from which they are derived, it is found that toxicity varies to a great extent with the rate of their decomposition; thus, formanilide is more toxic than is acetanilide. A second factor in the toxicity of these bodies is the molecular weight of the resulting acid, an increase in this respect leading to a diminution in pharmacological potency. A third factor of importance is found in the degree of its chemical affinity for the tissues of the body, and it is seen in the case of the toluidines, for example, that the "para" salt is active, while the "meta" salt is of little potency and the "ortho" salt is inert. Thus atoxyl—p.-amino-phenyl-arsenic acid—is effective against trypanosomes, while its meta- and ortho- relatives are of little or no value (Breinl and Nierenstein). The power of certain bodies to attach themselves to the molecule of protoplasm seems in some cases to depend on the presence in them of an amino group. Atoxyl may again be taken as an instance, since if its NH_2 group is replaced by OH or by $N(CH_3)_2$ its activity as a trypanocide is lost. Finally, the activity of any substance when it has attached itself to a living cell is influenced by the rate at which it is again broken off from the cell and excreted. Dr. Davis therefore suggests as a guide to investigation a hypothetical formula in which the "toxicity constant" of any body is equal to its "physiological affinity" divided by its "excretion constant." The whole paper is interesting and stimulating, and deserves the attention of those who are versed in the problems of pharmacological actions, while it leads us to hope that the old taunt against physicians, that they poured drugs of which they knew little into bodies of which they knew less, is in process of being rendered obsolete by extension of pharmacological as well as of physiological knowledge.

"SYNTHETIC MILK."

LAST week the papers announced the production of "synthetic milk," and in response to an invitation from the company connected with the exploitation of this new food product our consulting chemist was able to inspect and taste a sample of the first consignment sent to this country. Later we may have the opportunity of examining "synthetic milk" with some detail, but it may be said, without pre-judging the case, that the substance looks very like milk, and has a round, sweet, fatty flavour not unlike that of rich milk. It appears to be an ingeniously made uniform emulsion, and is said to contain a rather larger proportion of the nutritive constituents of ordinary milk, derived from the soya bean amongst other vegetable sources. There was present at the demonstration a good representation of scientific authorities, so that further details in regard to the actual dietetic qualities of "synthetic milk" will sure to be forthcoming. It is stated that the product can be retailed at 3*d*. a quart. Soya milk is referred to in certain text-books on foods, and is said to be made by boiling the beans until they are soft and then beaten to a pulp. The theory of an ingenious preparation is that a vegetable casein then passes into solution and forms an opalescent fluid which resembles milk by the fact of a skin forming on its surface when boiled, just as in the case of cow's milk, and the casein further can be precipitated from solution, it is stated, by rennet or acids. But, of course, casein is only one of the constituents of cow's milk, and "synthetic milk" is said to contain them all.

TYPHOID PLEURISY.

PLEURISY has long been recognised as a complication of typhoid fever, but only in recent years has it been bacteriologically investigated. A considerable number of cases in which the typhoid bacillus was found in pure culture has now been recorded, mostly by French writers. In the *Canadian Medical Association Journal* for September Dr. F. G. Finley has published an important paper on Typhoid Pleurisy based on a study of the literature and an analysis of 19 cases which occurred at the Montreal General Hospital among 2100 cases of typhoid fever under treatment from 1897 to June, 1912. Pleurisy occurring with well-marked pneumonia or found with pneumonia at the necropsy is excluded. The incidence of pleurisy varies considerably in different epidemics of typhoid fever and in different localities, but most writers agree that it is one of the rarer complications. At the Johns Hopkins Hospital Dr. J. McCrae found pleurisy present in 2 per cent. of the cases of typhoid fever. Two French writers, Lesné and Ravaut, found pleurisy with pure cultures of the typhoid bacillus in 0·66 per cent. of the cases. On the other hand, other writers give a much higher percentage, Heymann as much as 14 per cent. Pleurisy usually develops towards the middle of, or in the latter part of, the febrile process, but it may occur at the onset or after defervescence. The symptoms do not materially differ from those of ordinary pleurisy. In Dr. Finley's series of cases the pain was usually present early, and sometimes was severe. The temperature, pulse, and respiration showed a slight increase, and a moderate amount of fluid was usually found within

a couple of days. Friction was heard in most of the cases. One feature frequently noticed was the persistence of crepitant or subcrepitant râles during the period of effusion, suggesting a simultaneous pulmonary lesion. A point of practical importance was the occurrence of abdominal pain often associated with rigidity. In some cases these symptoms were so marked as to suggest perforation of the bowel. We may point out that a case of typhoid fever has recently been described in our columns,[1] in which the abdominal symptoms produced by pneumonia so simulated perforation that laparotomy was performed. The fluid in typhoid pleurisy may be sero-fibrinous, hæmorrhagic, or purulent. Agglutination of typhoid bacilli is usually produced by the fluid, but to a much less degree than by the blood. However, Achard has recorded a case in which the reverse held. This property of the fluid may prevent typhoid bacilli being found on culture. The leucocyte count is usually low, but in one of Dr. Finley's cases it rose to from 4000 to 7800 after the onset of the pleurisy. The course of typhoid pleurisy is generally benign, the fluid remains small in amount, and is absorbed in a period varying from two days to several weeks. Only one of the 19 cases was fatal. In this case the patient was a man, aged 27 years, who had a high temperature, delirium, rose spots, bronchitis, with muco-purulent sputum, and feeble heart action. There was no evidence of pleurisy during life, and he died from toxæmia on the thirty-fourth day. The Widal reaction was positive. At the necropsy, in addition to the usual lesions of typhoid fever, 375 cubic centimetres of bright red fluid in the left pleural cavity, broncho-pneumonia, and an infarct in the left lung were found. Cultures from the pleural fluid yielded the typhoid bacillus in pure culture. Galliard has insisted on the importance of pulmonary infarct in the production of pleurisy. Phlebitis was a frequent complication in the pleuritic cases, being present in six.

THE THIRD INTERNATIONAL CONGRESS FOR DISEASES OF OCCUPATION.

THE International Congress for Diseases of Occupation undoubtedly occupies a field of research for which there is a great opportunity. The industrial age has brought about so many new conditions that it is small wonder that it also brings in its train new developments in the way of disease, and the study of them is as yet only in its infancy. The third Congress will be held in Vienna in the autumn of 1914, and among those who have promised to take part are the Association of Certifying Factory Surgeons (London), Sir Arthur Whitelegge, chief inspector of factories (London), Miss Anderson, principal lady inspector of factories (London), Professor Heim (Paris), Professor Hahn (Königsberg), and Hofrat Professor S. Exner (Vienna). The sections will be seven in number—viz., 1. Fatigue: Physiology and Pathology, especially with regard to professional work, Effect of Professional Exertion on the Nervous System, and Night Work. Among those who have promised to take part in the proceedings of this section are Professor Boeri (Naples), Dr. A. Glen Park (Bolton), Dr. Rutten (Liége), and Professor Weichardt (Erlangen). 2. Work in Hot and Damp Air—M. Boulin, inspecteur divisionnel du travail (Lille), Professor Langlois (Paris), Professor F. Marboutin (Paris). 3. Anthrax—M. Cavaillé, inspecteur départemental du travail (Castres), Professor Peroncito (Turin), Professor A. Schattenfroh (Vienna), Professor A. Sclavo (Siena). 4. Pneumoconioses—Professor Langlois, Sir Thomas Oliver (Newcastle-on-Tyne). 5. Injuries through Electricity—Privat-docent Dr. S. Jellinek (Vienna). 6. Industrial Poisons, especially anilin, mercury, and lead—Sir Thomas Oliver, Privat-docent Dr. Rambousek (Prague), Dr. F. Curschmann (Bitterfield), Dr. Alice Hamilton (Chicago). 7. Injuries of Hearing—Professor Alt (Vienna), Dr. Peyser (Berlin), and Professor Siebermann (Basle). Those particularly interested in this subject and desiring further particulars should address Privat-docent Dr. L. Teleky, 23, Türkenstrasse, Vienna IX. The notice given of the Congress is long, but commendably so, for reports made to it, if they are to be of full public value, should be founded on a range of practical work, and made authoritative by close testing.

[1] THE LANCET, April 20th, 1912, p. 1075.

SEPTEMBER AT HOME AND ABROAD.

THE weather of September, like that of August, was remarkable for its low temperature, but in every other important respect it was entirely different. Soon after the beginning of the month an anticyclonic, instead of a cyclonic, distribution of barometric pressure came over the United Kingdom from the westward and north westward, and as the centre of the high pressure system lay either directly over this country, the North Sea, or the countries immediately beyond, for about three weeks, it formed during that period an effectual barrier against the Atlantic cyclones. These latter were compelled to travel along a more northerly track, many of them passing somewhere between Iceland and Greenland. Towards the end of the month, however, the anticyclone became exhausted, and as the barometer at once rose in Iceland the cyclonic disturbances found their way over these islands, giving very general rain. In the south and south east the downpour was so heavy that more rain fell within 48 hours or so than generally occurs during the whole month. The lack of seasonable warmth was mainly due to the lack of sunshine, for in spite of the general dryness the sky was much more often cloudy than clear. In the metropolitan area there was a deficiency of about an hour per day. Three days were entirely sunless, and on seven others the record was less than an hour. In few other parts of the kingdom was the quantity of sunshine so poor, but over very extensive districts the figure varied between a half and three-quarters of an hour per day less than the normal. At Jersey there was a mean of about five hours per day, while at Kew the mean was no more than 3·7 hours per day. At Buxton and in the north Midlands generally the total number of hours for the month was less than 100, but at Harrogate it equalled 106 hours. In the south Midlands and south-west of England the supply was more liberal. At Bath the figure was 131 hours, and at Newquay 148 hours. The weather did not become generally dry until after the first few days, but subsequently until the 29th there was hardly a drop of rain, except on one or two occasions in the south-west of England, in the south and south-west of Ireland, and in a few localities in Scotland. The month cannot but be considered a very dry one, even in the southern districts of the kingdom, where the actual quantity of rain equalled or exceeded the average. In nearly all localities north of the Thames the total rainfall was considerably less than the normal, many places having a record of less than an inch. The lack of seasonable heat during the daytime was at least as unusual as the many days without rain. The difference from the temperature normal was nearly 6° over a large portion of England during the afternoons and about 3° after sunset. At Kew the shaded thermometer failed to touch the moderate figure of 60° on as many as 15 days, and on the 9th, 10th, and 11th it remained below 55°. In the north Midlands, as represented by Harrogate, there were 24 days with a maximum below 60°, while at Aberdeen there were 28 days. At Bath, where the afternoon warmth showed a

defect of only 3°, the thermometer touched 70° on the 16th, and only failed to reach 60° on five other days. At Newquay there were 24 days cooler than 60°, but the nights were 3° milder than in London and 4½° warmer than at Bath. On the Continent the meteorological condition in its main features was similar to that in this country. The temperature was almost invariably below the normal and a rainy day the exception. At Paris the mean maximum temperature was 62°, no more than 2° higher than in London (Kew), and only ½° higher than at Bath, while its minimum was as low as 43·7°, a lower figure than at Buxton and Aberdeen. Very little rain—less than 0·5 in.—was experienced, and on a large number of days the duration of sunshine exceeded seven hours. There were, however, five days quite sunless, and the total number of hours, 130, was less than at several places in southern and south-western England. At Berlin the days were 4° colder than at Paris, while the nights were more than 2° warmer, and the total rainfall, divided between seven days, was no more than 0·7 in. No night had a minimum temperature as low as 40°, whereas at Paris the thermometer went below that figure on eight occasions. Brussels formed an exception to the rule in regard to rainfall. The first half of the month was wet, and rain again fell towards the close, yielding a total of 3·5 in. No warmth worthy of September was recorded, and the mean temperature was only 59°, a degree lower than at Kew, and only just equal to that at Nottingham. On five nights the thermometer descended below 40°, and the mean minimum temperature was a little lower than at most places in Scotland and the north of England. In the south of Europe the deficiency of heat was less marked, although there was an absence of very hot days, such as generally occur sometimes in September. Shade temperature readings of about 80° were not at all uncommon in Italy during the earlier half of the month, and later it was seldom that the days were cooler than 70°, except in the extreme north of the country.

FATAL AIR EMBOLISM DUE TO ATTEMPTS TO INDUCE ABORTION.

THE attempt to induce abortion by injection of fluid into the uterus may be attended by a fatal accident. If the operator is so unskilled as to inject air with the fluid it may enter a vein torn in separating the placenta and cause embolism. Only a few cases of this accident are on record, but curiously as many as four have been reported in one Australian medical journal in a little over three years. In the *Australasian Medical Gazette* of August 10th last Dr. J. E. Dods has published two cases. In the first a married woman, aged 23 years, and in apparently perfect health, one morning visited several friends, to none of whom did she make any complaint. She returned home, and at 9.30 A.M. was found lying dead on the bedroom floor. Beside her were two basins, of which one contained fluid and a Higginson's syringe. At the necropsy two small clots were found lying at the vulva. The heart was healthy, but its right side was distended with fluid frothy blood. The inferior vena cava and both iliac veins contained air. The uterus was of the size corresponding to four months' pregnancy and was emphysematous. The placenta was attached above and anteriorly, and was separated a little at its lower margin. The fœtus was normal and the membranes were unruptured. There was a little blood at the external os. All the other organs appeared normal. Dr. Dods concluded that death was due to air embolism, following partial separation of the placenta and injection of air into the uterus. Six months later he was asked to examine a woman who died suddenly in her home. She was apparently in good health till the middle of the day, when she called a neighbour, who rushed in and found her lying on the floor, and she died soon afterwards. There was a little bloody discharge at the vulva. The heart was distended with frothy fluid blood, and the inferior cava and common iliac veins contained air bubbles. The uterus was of the size corresponding to three months' pregnancy, and there was a little bloody mucus at the external os. On opening the uterus distinct signs of the passage of an instrument were found. The ovum was unruptured, but there were small hæmorrhages along the course of the instrument. The police ascertained that on the previous evening the deceased had visited a woman who had the reputation of being an abortionist, but evidence to warrant a prosecution could not be obtained. In this case the evidence that death was due to injection of air into the uterus was not so clear as in the previous one, and the possibility of infection by the bacillus aerogenes capsulatus arose. Unfortunately a bacteriological examination was not made. In 1910 Dr. A. A. Palmer[1] reported the case of a widow, aged 24 years, who was using per vaginam an enema syringe—presumably to induce abortion—when she jumped up quickly and said she was in terrible pain, and that her stomach was swelling. Almost immediately she collapsed, clenched her teeth, frothed at the mouth, and died. The necropsy showed small hæmorrhages beneath the visceral pleuræ and larger ones beneath the diaphragmatic pleuræ and peritoneum. The lungs were œdematous and engorged with dark blood. The right side of the heart was distended with dark fluid blood containing air but no froth. The uterus contained a male fœtus 8½ inches long. The amnion was not ruptured, but was stripped off the lower pole of the uterus. The placenta was a good deal torn below. A packet of sulphate of zinc was found in the room, and the Government analyst found zinc in the organs and in the syringe. Mr. Palmer refers to a similar case[2] in which the drug used was permanganate of potassium.

A MEETING, under the presidency of the Lord Mayor, will be held at the Mansion House on Oct. 23rd, at 2.30 P.M., for the purpose of raising a fund for establishing a memorial to the late Lord Lister. The meeting will be addressed by the Prime Minister, Lord Avebury, the President of the Royal Society, the President of the Royal College of Surgeons, and the Hon. W. F. D. Smith.

ON Tuesday, Nov. 12th, at 8 P.M., at the Royal Sanitary Institute, 90, Buckingham Palace-road, a discussion will be opened on the Report of the Departmental Committee on Intercepting Traps and House Drains, by Mr. H. Percy Boulnois, M.Inst.C.E., chairman of the Council of the Institute. The report was reviewed in our columns in a leading article on Sept. 21st.

THE first ordinary meeting of the recently constituted Section of Psychiatry of the Royal Society of Medicine will take place at 1, Wimpole-street, W., on Tuesday, Oct. 22nd, at 8.30 P.M., when the president, Sir George H. Savage, will deliver his address.

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[1] Australasian Medical Gazette, April 20th, 1910.
[2] Ibid., April 20th, 1909.

LONDON HOSPITAL MEDICAL COLLEGE.—The following scholarships have been awarded:—Price scholarship in science, £100, R. G. Simpson; Price University scholarship in anatomy and physiology, £52 10*s.*, W. D. Newcomb, Trinity College, Cambridge, and A. C. Ainsley, Caius College, Cambridge (equal, scholarship divided); entrance science scholarship, £50, V. J. F. Lack; Epsom scholarship, £126, S. H. de G. Pritchard; Buxton scholarship in arts, £31 10*s.*, H. L. Douglas and S. E. Harvey (equal, scholarship divided).

THE LONDON COUNTY COUNCIL AND MEDICAL AFFAIRS.

Treatment of Minor Ailments.

THE London County Council decided last year that a uniform charge of 1*s.* should be made to parents in respect of the medical treatment of children suffering from ailments of the eye, ear, nose, and throat, and from ringworm, and in respect of dental treatment, but that a charge of 1*d.* should be made in the case of children who had been ascertained by the children's care (school) committees to be necessitous, and in approved cases where it had been ascertained by careful inquiry that the parents had been accustomed to subscribe to the Hospital Saturday Fund or had any other legitimate claim to free hospital treatment. The Education Committee reported to the Council on Oct. 15th as to the charges to be made for the treatment of minor ailments, as to which the Council has just made arrangements. In cases where the nursing treatment for minor ailments was supplemental or incidental to medical treatment the committee thought that the present charge of 1*s.* or 1*d.* would suffice. In other cases, however, it would be necessary to make a charge for the services rendered; and as a large proportion of the cases would be of quite a minor character, and the treatment required would be simple and would take up a comparatively small amount of time, a uniform charge of 3*d.* would be suitable, subject to a reduction of 1*d.* in necessitous cases and in cases where the parents had been accustomed to subscribe to the Hospital Saturday Fund or had any other legitimate claim to free hospital treatment.

The Council approved the suggested charge.

London Ambulance Service.

During "question time" at the meeting of the Council on Oct. 15th Mr. H. L. JEPHSON asked the chairman of the General Purposes Committee whether a return could be prepared showing the number of street accidents in London during the last three years. On receiving a promise that the matter would be brought before the committee, Mr. Jephson further asked whether it was a fact that the question of the provision of an ambulance service for London had been before the General Purposes Committee for five and a half years without any decision having been arrived at; that three and a half years had elapsed since a departmental committee reported, and that no action had been taken thereon.

Mr. H. J. GREENWOOD, chairman of the committee, replied that the matter had been before the Council since 1901. In 1906 the Council unsuccessfully promoted legislation on the subject. The departmental committee issued its report in March, 1909, and in the same year the Council was empowered by Parliament to establish an ambulance service for London if it thought fit. The General Purposes Committee was making exhaustive inquiries, and when its negotiations were concluded it would report to the Council.

Chairman's Annual Address.

In the course of his annual address as chairman of the Council Lord CHEYLESMORE referred at some length to the reorganisation of the school medical work under the direction of the medical officer of health for the county, to the appointment of Dr. W. H. Hamer as medical officer, to the retention of Sir Shirley Murphy's services in a consultative capacity, and to the agreements that have been entered into with hospitals and committees of local practitioners for the medical treatment of school children. He mentioned the important drainage works now in progress in the metropolis, and added that the Council had maintained its policy of securing, whenever possible, open spaces for the public. There were now 116 parks and open spaces in the administrative county, their area amounting to 5100 acres. The provision of sanatoria for the treatment of tuberculosis was under consideration, and much information as to existing means of treatment had been collected. The number of lunatics during 1911–12 had showed a larger increase than in the previous year, and the accommodation of the London asylums having been found insufficient, plans for an eleventh asylum had been prepared and were awaiting the sanction of the Home Secretary. Progress had been made with the designing of a mental hospital, towards the cost of which Dr. Henry Maudsley had so generously contributed £30,000. New legislation in regard to the mentally defective, if carried by Parliament, would throw additional responsibility upon the Council.

Medical Treatment.

In reply to a request by the London County Council that it would define more explicitly the basis of the allocation of the Government grant of £60,000 towards the medical inspection of school children, the Board of Education, in a letter communicated to the Education Committee of the Council on Oct. 16th, stated that nothing could be added at present to the reply given in the House of Commons by the Parliamentary Secretary to the Board on May 6th, 1912, that the amount of money at the Board's disposal was strictly limited, and that it would not be possible to state even approximately how the grant would be apportioned until statements of expenditure actually incurred during the year ended July 31st, 1912, had been considered.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In the 95 largest English towns, with an aggregate population estimated at 17,639,881 persons at the middle of this year, 8499 births and 4629 deaths were registered during the week ending Oct. 12th. The annual rate of mortality in these towns, which had been 11·6, 11·9, and 12·3 in the three preceding weeks, further rose to 13·7 per 1000 during the week under notice. During the 13 weeks of the quarter ended with September the mean annual rate of mortality in these towns averaged 11·4 per 1000, against 11·5 per 1000 in London during the same period. The annual death-rates in the several towns last week ranged from 4·0 in Wakefield, 5·5 in Wimbledon, 5·8 in Eastbourne, 6·2 in Lincoln, and 6·3 in Ilford, to 18·5 in Warrington, 18·6 in Rochdale, 18·7 in Liverpool and in Blackburn, 18·8 in Burnley, and 19·7 in Gloucester.

The 4629 deaths from all causes in the 95 towns were 476 in excess of the number in the previous week, and included 394 which were referred to the principal epidemic diseases, against 310 and 352 in the two preceding weeks. Of these 394 deaths, 129 resulted from infantile diarrhœal diseases, 139 from measles, 56 from diphtheria, 33 from whooping-cough, 26 from scarlet fever, and 11 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·2 per 1000, against 0·9 and 1·0 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœa and enteritis, which had been 150, 134, and 153 in the three preceding weeks, fell to 129 last week; of this number, 32 were recorded in London and its 14 suburban districts, 18 in Liverpool, 9 in Birmingham, 8 in Manchester, 5 in Blackburn, 4 in Leeds, 4 in Sheffield, and 3 each in Bristol, Stoke-on-Trent, and Wolverhampton. The deaths referred to measles, which had been 85, 67, and 90 in the three preceding weeks, rose to 139 last week, and caused the highest annual death-rates of 1·1 in West Ham and in Hull, 1·2 in Newcastle-on-Tyne, 1·7 in Tynemouth and in Rhondda, 2·0 in Liverpool and in Barnsley, 2·3 in Birkenhead, and 2·9 in Dewsbury. The fatal cases of diphtheria, which had increased from 23 to 43 in the six preceding weeks, further rose to 56 last week, and included 15 in London and its suburban districts, 6 in Leeds, 4 in Liverpool, and 3 in Birmingham. The deaths from whooping-cough, which had been 49, 44, and 29 in the three preceding weeks, rose to 33 last week, and included 19 in London and its suburban districts, 3 in Liverpool, and 2 each in Stoke-on-Trent and in Burnley. The deaths attributed to scarlet fever, which had been 24, 17, and 17 in the three preceding weeks, rose again to 26 last week, and included 5 in London and its suburban districts, 4 in Birmingham, and 2 each in Manchester and in Sheffield. The fatal cases of enteric fever, which had been 11, 7, and 20 in the three preceding weeks, declined again to 11 during the week under notice; 2 of these deaths were registered in London and 2 in Stoke-on-Trent.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily risen from 1512 to 1995 in the seven preceding weeks, further rose to 2095 on Saturday last; 322 new cases of this disease were

admitted to these institutions during the week, against 311, 305, and 317 in the three preceding weeks. These hospitals also contained on Saturday last 933 cases of diphtheria, 448 of measles, 270 of whooping-cough, and 50 of enteric fever, but not one of small-pox. The 1343 deaths from all causes in London were 193 more than the number in the previous week, and were equal to an annual death-rate of 15·5 per 1000. The deaths referred to diseases of the respiratory system, which had been 140, 169, and 191 in the three preceding weeks, further rose to 282 last week, and were 72 more than the number registered in the corresponding week of last year.

Of the 4639 deaths from all causes in the 95 towns last week, 171 resulted from different forms of violence, and 392 were the subject of coroners' inquests. The causes of 32, or 0·7 per cent., of the deaths registered were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Sheffield, Leeds, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, and in 71 other smaller towns. The 32 uncertified causes of death last week included 5 in Liverpool, 4 in Birmingham, 3 in Bootle, 3 in Gateshead, and 2 each in London, Norwich, Warrington, and Barrow-in-Furness.

HEALTH OF SCOTCH TOWNS.

In the 18 largest Scotch towns, with an aggregate population estimated at 2,182,400 persons at the middle of this year, 1138 births and 591 deaths were registered during the week ending Saturday, Oct. 12th. The annual rate of mortality in these towns, which had declined from 13·8 to 13·0 and 12·2 in the preceding three weeks, rose again to 14·1 per 1000 in the week under notice. During the 13 weeks of the quarter ended with September the mean annual rate of mortality in these Scotch towns averaged 13·2 per 1000, against 11·4 in the 95 large English towns. Among the several Scotch towns the annual death-rates last week ranged from 6·5 in Clydebank, 6·8 in Partick, 7·7 in Leith, and 8·0 in Paisley, to 17·1 in Ayr, 18·9 in Dundee, 19·9 in Greenock, and 21·4 in Falkirk.

The 591 deaths from all causes were 82 above the number in the previous week, and included 59 which were referred to the principal epidemic diseases, against 35, 29, and 36 in the three preceding weeks. Of these 59 deaths, 28 resulted from infantile diarrhœal diseases, 11 from whooping-cough, 10 from diphtheria, 5 from scarlet fever, 3 from enteric fever, and 2 from small-pox, but not one from measles. The 59 deaths from the principal epidemic diseases were equal to an annual rate of 1·4 per 1000, against 1·2 in the 95 large English towns. The deaths of infants under 2 years of age attributed to diarrhœa and enteritis, which had been 13, 12, and 15 in the three preceding weeks, further rose to 28 last week, and included 10 in Glasgow, 6 in Dundee, 3 in Edinburgh, 3 in Coatbridge, and 2 in Govan. The fatal cases of whooping-cough, which had been 9, 3, and 4 in the three preceding weeks, further rose to 11 last week, and included 3 in Glasgow and 2 each in Edinburgh and in Aberdeen. The deaths from diphtheria, which had been 5, 7, and 10 in the three preceding weeks, were again 10 last week, and included 3 in Glasgow and 2 each in Dundee and in Greenock. The 5 deaths from scarlet fever were equal to the average in the three preceding weeks, and included 2 in Dundee. The 2 fatal cases of small-pox were registered in Kirkcaldy.

The deaths referred to diseases of the respiratory system in the 18 Scotch towns, which had been 74, 68, and 62 in the three preceding weeks, rose to 80 in the week under notice; 34 deaths were attributed to different forms of violence, against 16 and 30 in the two previous weeks.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an aggregate population estimated at 1,154,150 persons at the middle of this year, 571 births and 389 deaths were registered during the week ending Oct. 12th. The annual rate of mortality in these towns, which had been 14·7, 14·5, and 15·5 per 1000 in the three preceding weeks, further rose to 17·6 per 1000 in the week under notice. During the 13 weeks of the quarter ended with September the mean annual death-rate in these towns averaged 14·5 per 1000; in the 95 large English towns the corresponding death-rate did not exceed 11·4, while in the 18 Scotch towns it was equal to 13·2 per 1000. The annual death-rate in the several Irish towns last week was equal to 19·4 in Dublin (against 15·5 in London), 18·0 in Belfast, 16·3 in Cork, 12·8 in Londonderry, 29·8 in Limerick, and 20·9 in Waterford, while in the remaining 16 smaller towns the mean death-rate was 11·1 per 1000.

The 389 deaths from all causes in the 22 Irish towns were 47 more than the number in the previous week, and included 45 which were referred to the principal epidemic diseases, against 26 and 34 in the two previous weeks; of these 45 deaths, 20 resulted from measles, 13 from diarrhœal diseases, 6 from diphtheria, 4 from scarlet fever, and 2 from enteric fever, but not one from whooping-cough or from small-pox. These 45 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·0 per 1000; in the 95 large English towns the death-rate from these diseases last week was 1·2 per 1000, while in the 18 Scotch towns it was equal to 1·4 per 1000. The deaths attributed to measles, which had been 3, 5 and 12 in the three preceding weeks, further rose to 20 last week, and included 15 in Limerick and 4 in Belfast. The deaths from diarrhœa and enteritis, which had been 10, 11, and 13 in the three preceding weeks, were again 13 last week, and included 11 of children under 2 years of age; 6 deaths were registered in Dublin and 6 in Belfast. The deaths from diphtheria, which had been 1, 3, and 1 in the three preceding weeks, rose to 6 last week, and included 3 in Dublin and 3 in Belfast. The 4 deaths from scarlet fever were equal to the average in the three preceding weeks. All 4 of the deaths were registered in Belfast. Of the 2 deaths from enteric fever, 1 was registered in Dublin and the other in Belfast.

The deaths referred to diseases of the respiratory organs in the 22 towns, which had been 51, 53, and 49 in the preceding three weeks, rose to 70 last week. Of the 389 deaths from all causes, 119, or 30·6 per cent., occurred in public institutions, and 14 resulted from different forms of violence. The causes of 12, or 3·1 per cent., of the total deaths registered were not certified either by a registered medical practitioner or by a coroner after inquest; in the 95 large English towns the proportion of uncertified deaths last week did not exceed 0·7 per cent.

VITAL STATISTICS OF LONDON DURING SEPTEMBER, 1912.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the ten diseases specified in the table was equal to an annual rate of 6·3 per 1000 of the population, estimated at 4,519,754 persons in the middle of the year; in the three preceding months the rates were 4·8, 4·9, and 4·7 per 1000 respectively. The lowest rates last month were recorded in Kensington, the City of Westminster, Hampstead, Stoke Newington, the City of London, and Lambeth; and the highest rates in St. Pancras, Bethnal Green, Stepney, Bermondsey, and Woolwich. Scarlet fever was much more prevalent than it had been in any previous month of this year; among the various metropolitan boroughs it was proportionally most prevalent last month in Hammersmith, St. Pancras, Islington, Stepney, Bermondsey, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 1380, 1482, and 1511 at the end of the three preceding months, had further risen to 1845 at the end of last month; the weekly admissions averaged 277, against 184, 198, and 190 in the three preceding months. The prevalence of diphtheria showed an increase over that recorded in any of the five preceding months; this disease was proportionally most prevalent last month in St. Pancras, Islington, Poplar, Deptford, Greenwich, Lewisham, and Woolwich. The Metropolitan Asylums Hospitals contained 941 diphtheria patients at the end of last month, against 877, 825, and 827 at the end of the three preceding months; the weekly admissions averaged 141, against 112 and 98 in the two preceding months. Enteric fever, also, was considerably more prevalent than in other recent months; the greatest proportional prevalence of this disease was recorded in Fulham, Holborn, Finsbury, Bermondsey,

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING SEPTEMBER, 1912.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1912.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.									Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.		
LONDON	**4,519,754**	—	**1139**	**615**	—	**76**	—	**28**	**311**	**3**	**21**	**2193**	**6·3**	—	**77**	**13**	**37**	**45**	**8**	**185**	**365**	**1·1**	**4114**	**12·5**
West Districts.																								
Paddington	142,362	—	20	15	—	2	—	—	13	—	—	50	4·6	—	1	1	1	—	1	6	10	0·9	114	11·1
Kensington	171,746	—	14	12	—	2	—	—	6	—	—	34	2·6	—	—	1	—	1	1	6	9	0·7	146	12·0
Hammersmith	122,750	—	46	14	—	2	—	—	5	—	—	67	7·1	—	1	1	2	1	—	2	7	0·7	103	11·4
Fulham	155,402	—	35	19	—	6	—	3	12	—	—	75	6·3	—	2	—	1	3	1	1	8	0·7	123	10·8
Chelsea	65,397	—	14	9	—	1	—	1	4	—	—	29	5·8	—	3	—	—	1	—	—	4	0·8	77	15·9
City of Westminster	157,248	—	13	21	—	2	—	1	8	1	2	48	4·0	—	—	—	3	—	—	2	5	0·4	107	10·0
North Districts.																								
St. Marylebone	116,155	—	24	15	—	—	—	—	4	—	—	43	4·8	—	6	1	—	3	1	1	12	1·3	95	11·4
Hampstead	85,966	—	4	7	—	—	—	—	2	—	1	14	2·1	—	1	—	1	—	—	—	2	0·3	45	7·7
St. Pancras	216,145	—	72	70	—	—	—	—	18	—	—	160	9·6	—	2	—	1	2	—	3	8	0·5	215	13·6
Islington	326,398	—	102	60	—	7	—	1	12	—	1	183	7·3	—	5	2	4	2	1	11	25	1·0	314	13·0
Stoke Newington	50,581	—	3	6	—	—	—	—	3	1	1	14	3·6	—	—	—	—	—	—	1	1	0·3	38	10·2
Hackney	222,986	—	55	18	—	3	—	2	15	—	1	94	5·5	—	1	—	2	1	—	11	15	0·9	203	12·4
Central Districts.																								
Holborn	48,026	—	10	6	—	4	—	—	3	—	—	23	6·2	—	1	—	—	—	—	—	1	0·3	43	12·6
Finsbury	86,130	—	20	8	—	3	—	—	10	—	1	42	6·4	—	15	1	—	2	—	3	21	3·2	129	20·2
City of London	18,695	—	1	2	—	—	—	—	2	—	—	5	3·5	—	—	—	—	—	—	1	1	0·7	25	19·1
East Districts.																								
Shoreditch	110,430	—	16	14	—	3	—	1	7	1	—	42	5·0	—	6	1	1	—	1	15	24	2·8	137	17·0
Bethnal Green	127,985	—	37	15	—	2	—	2	24	—	1	81	8·3	—	3	—	1	5	—	5	14	1·4	121	12·4
Stepney	277,315	—	143	30	—	5	—	—	37	—	—	215	10·1	—	3	1	3	2	—	32	41	1·9	294	14·4
Poplar	161,597	—	36	26	—	2	—	4	16	—	1	85	6·9	—	10	—	—	—	—	14	24	1·9	165	13·7
South Districts.																								
Southwark	190,017	—	53	24	—	3	—	2	12	—	1	95	6·5	—	6	—	2	—	—	15	23	1·6	208	14·9
Bermondsey	125,260	—	41	18	—	6	—	2	14	—	1	82	8·5	—	2	—	3	3	—	8	16	1·7	138	14·8
Lambeth	297,560	—	46	28	—	3	—	1	11	—	5	94	4·1	—	1	—	2	2	—	16	21	0·9	254	11·5
Battersea	167,589	—	42	15	—	4	—	1	6	—	—	68	5·3	—	3	1	2	4	—	8	18	1·4	159	13·3
Wandsworth	321,881	—	72	29	—	4	—	5	17	—	1	128	5·2	—	1	—	1	3	—	10	15	0·6	231	9·9
Camberwell	261,591	—	77	34	—	5	—	1	18	—	3	138	6·9	—	1	1	—	5	1	8	16	0·8	240	12·4
Deptford	109,377	—	32	17	—	1	—	—	13	—	1	64	7·6	—	2	1	1	—	—	4	8	1·0	94	11·8
Greenwich	95,994	—	29	16	—	3	—	—	10	—	—	58	7·9	—	—	1	2	2	—	1	6	0·8	89	12·4
Lewisham	165,249	—	24	28	—	3	—	1	5	—	—	61	4·8	—	—	—	1	2	1	1	5	0·4	123	10·1
Woolwich	121,932	—	58	39	—	—	—	—	4	—	—	101	10·8	—	1	—	3	1	—	—	5	0·5	84	9·6
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

Battersea, and Greenwich. There were 49 enteric fever patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 32, 33, and 37 at the end of the three preceding months; the weekly admissions averaged 10, against 6 in each of the two preceding months. Erysipelas was proportionally most prevalent last month in Paddington, Finsbury, Bethnal Green, Stepney, Bermondsey, and Deptford. The 28 cases of puerperal fever notified during the month included 5 in Wandsworth, 4 in Poplar, 3 in Fulham, 2 in Hackney, 2 in Bethnal Green, 2 in Southwark, and 2 in Bermondsey. The 3 cases of cerebro-spinal meningitis belonged respectively to the City of Westminster, Stoke Newington, and Shoreditch; and of the 21 cases notified as poliomyelitis 5 belonged to Lambeth, 3 to Camberwell, and 2 to the City of Westminster.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided; the death-rates from all causes are further corrected for variations in the sex- and age-constitution of the populations of the several boroughs. During the four weeks ending Sept. 28th the deaths of 4114 London residents were registered, equal to an annual rate of 12·5 per 1000; in the three preceding months the rates were 11·6, 11·8, and 12·1 per 1000 respectively. The death-rates last month ranged from 7·7 in Hampstead, 9·6 in Woolwich, 9·9 in Wandsworth, 10·0 in the City of Westminster, 10·1 in Lewisham, and 10·2 in Stoke Newington, to 14·8 in Bermondsey, 14·9 in Southwark, 15·9 in Chelsea, 17·0 in Shoreditch, 19·1 in the City of London, and 20·2 in Finsbury. The 4114 deaths from all causes included 365 which were referred to the principal infectious diseases; of these, 77 resulted from measles, 13 from scarlet fever, 37 from diphtheria, 45 from whooping-cough, 8 from enteric fever, and 185 from diarrhœa and enteritis among children under two years of age. The lowest death-rates from these diseases in the aggregate were recorded in the City of Westminster, Hampstead, St. Pancras, Stoke Newington, Holborn, Lewisham, and Woolwich; and the highest rates in Finsbury, Shoreditch, Stepney, Poplar, Southwark, and Bermondsey. The 77 deaths from measles were 29 in excess of the corrected average number in the corresponding period of the five preceding years; this disease was proportionally most fatal last month in Chelsea, St. Marylebone, Finsbury, Shoreditch, and Poplar. The 13 fatal cases of scarlet fever were equal to one-half the corrected average number, and included 2 in Islington. The 37 deaths from diphtheria were 9 below the corrected average; the greatest proportional mortality from this disease was recorded in Hammersmith, the City of Westminster, Bermondsey, Greenwich, and Woolwich. The 45 fatal cases of whooping-cough showed a decline of 16 from the corrected average number; the highest death-rates from this disease were recorded in St. Marylebone, Finsbury, Bethnal Green, Bermondsey, and Battersea. The 8 deaths from enteric fever were 13 below the corrected average, and included 1 each in Paddington, Kensington, Fulham, St. Marylebone, Islington, Shoreditch, Camberwell, and Lewisham. The mortality from diarrhœa and enteritis among children under two years of age was proportionally greatest in Shoreditch, Stepney, Poplar, and Southwark. In conclusion, it may be stated that the aggregate mortality in London during September from the principal infectious diseases, excluding diarrhœa, was 10 per cent. below the average.

Port of London ... ...

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Deputy Surgeon-General: G. Welch to the Admiralty as Deputy Director-General, Medical Department. Fleet-Surgeons: H. F. Iliewicz to the *Inflexible* on recommissioning, and to the *Good Hope* for voyage home on transfer of flag; G. T. Collingwood to the *Inflexible* and for general staff duties on transfer of flag. Staff-Surgeons: A. J. Laurie to the *Victory* for R.N. barracks, temporary; G. Nunn to the *Shearwater* on recommissioning; N. J. Roche to the *Gibraltar* for medical charge for voyage out, and to the *Newcastle*, on recommissioning; J. P. H. Greenhalgh to the *Gibraltar* for medical charge for voyage home; J. G. Wallis to the *Thetis*; and J. Macdonald to the *Gibraltar* for voyage home. Surgeons: E. Cameron to the *Gibraltar* for voyage out, and to the *Espiegle* on recommissioning; W. G. Edwards to the *Inflexible* on recommissioning, and to the *Good Hope* for voyage home on transfer of flag; J. H. B. Martin and H. E. R. Stephens, both to the *Inflexible* on transfer of flag.

The following have been appointed Acting Surgeons, with seniority to date Oct. 4th, and to the *Victory*, additional, for course of instruction at R.N. Medical School, R.N. College, Greenwich, and R.N. Hospital, Haslar: F. St. B. Wickham, J. T. D. S. Higgins, J. G. Boad, S. Punch, A. E. Malone, H. M. Whelan, R. F. P. Cory, H. St. C. Colson, P. L. Gibson, and G. A. Finegan.

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned has been appointed Surgeon: Francis Herbert Watson (dated Oct. 11th, 1912).

ARMY MEDICAL SERVICE.

Colonel John R. Dodd, Half-Pay List, retires on retired pay (dated Oct. 12th, 1912). Surgeon-General George D. Bourke, C.B., is placed on retired pay (dated Oct. 15th, 1912.) Colonel Harold G. Hathaway to be Surgeon-General, vice G. D. Bourke, C.B. (dated Oct. 15th, 1912).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Reginald J. Windle, from the Seconded List, is restored to the establishment, vice Lieutenant-Colonel E. H. L. Lynden-Bell, promoted (dated Oct. 1st, 1912). Lieutenant-Colonel Cecil W. Johnson is placed on retired pay (dated Oct 11th, 1912). Major Robert J. W. Mawhinny to be Lieutenant-Colonel, vice C. W. Johnson (dated Oct. 11th, 1912). Captain James B. Clarke to be Major (dated Oct. 14th, 1912).

Colonel R. H. S. Sawyer has taken up duty as Officiating Deputy Director of Medical Services in the Irish Command, pending the arrival of Surgeon-General L. E. Anderson home from India. Lieutenant-Colonel G. Cree has been transferred to the Eastern Command and has taken up the appointment of Assistant Director of Medical Services at Bordon in succession to Colonel C. R. Tyrrell, who has retired on retired pay. Lieutenant-Colonel H. J. Fletcher, commanding the military hospital at Sialkot, has been transferred to the headquarters of the Abbottabad Brigade and appointed Senior Medical Officer. Lieutenant-Colonel R. J. Mawhinny has been placed under orders for a tour of service with the Northern Army in India.

Major F. W. Cotton has been placed under orders for a tour of service with the Southern Army in India. Major G. A. T. Bray has been transferred from Maidstone to Canterbury and has been appointed to hold charge of the Military Hospital in relief of Lieutenant-Colonel M. O'Halloran, appointed to the Military Hospital at Edinburgh. Major R. A. Cunningham has taken up duty at the headquarters of the Seventh (Meerut) Division as Deputy Assistant Director of Medical Services (Sanitary Branch), in succession to Major P. S. Lelean, whose tenure of the appointment has expired. Major F. A. Symons has taken up duty in medical charge of the Royal Garrison Artillery Companies at Cosham. Major C. R. Evans has arrived home on leave of absence from Malta. Major W. J. Taylor has been appointed to the Eastern Command for temporary duty pending embarkation for service abroad. Major R. C. Lewis has been permitted to exchange for service at Gibraltar with Captain A. W. Gibson, who will now proceed to India. Major C. H. Furnivall has been transferred from the Ninth (Secunderabad) Division to the Fourth (Quetta) Division of the Northern Army in India. Major F. Harvey has taken up duty at Leeds on transfer from Okehampton. Major J. W. Langstaff has been appointed to the Recruiting Medical Staff in the London recruiting area. Major H. H. Norman, in charge of the military hospital at Shwebo, has arrived home on leave of absence from Burma.

Captain W. F. H. Vaughan has been selected for appointment as Specialist in Operative Surgery to the Cork District, in succession to Captain R. M. Ranking, whose tenure of the appointment has expired. Captain H. O. M. Beadnell has been transferred from Chester to Trawsfynydd. Captain G. Ormrod has joined the Military Hospital at Londonderry for duty on transfer from Holywood. Captain G. G. Tabuteau has been appointed to the medical charge of Ticknock. Captain A. G. Wells has taken up duty at the Station

Hospital, Kasauli Cantonment. Captain R. W. D. Leslie, on return home tour expired from Malta, has been appointed to the Military Hospital at Gosport. Captain G. W. W. Ware has been posted from Dorchester to the Military Hospital at Cosham. Captain W. J. Dunn has been transferred from the Bombay Brigade to the Fifth (Mhow) Division. Captain J. W. L. Scott has been appointed for duty on board the transport s.s. *Rewa*, which left Bombay for Southampton with time-expired troops on October 10th. Captain T. J. Mitchell has been transferred from the Military Hospital at Lahore to Dalhousie Cantonment. Captain A. D. Fraser has taken up duty at Magilligan on transfer from the Military Hospital at Londonderry. Captain W. J. Tobin has been transferred from Secunderabad to the Station Hospital at Bellary, Madras Presidency. Captain T. S. Blackwell has been appointed to the Military Hospital at Athlone. The following officers serving in Ireland have been selected to attend the promotion course at the Royal Army Medical College commencing on Oct. 31st next:—Captains T. S. Blackwell, T. C. C. Leslie, D. Fraser, L. A. A. Andrews, V. T. Carruthers, and W. Benson. Captain R. S. Smyth has been appointed to the Military Hospital at Dalhousie on transfer from Ambala Cantonment. Captain H. Stewart has taken up duty at the Station Hospital, Solon, Simla Hill District. Captain E. M. Middleton, on transfer from Rawal Pindi Cantonment, has been posted for duty at Kyra Gali, Murree Hill District. Captain O. R. McEwan has taken up duty at the Station Hospital, Multan. Captain J. H. Spencer has been transferred from Ambala Cantonment to the Military Hospital at Upper Topa.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel W. Vost has been transferred from Lucknow to Fyzabad and appointed Civil Surgeon in succession to Lieutenant-Colonel G. H. Baker, who has been granted two years' leave of absence home from India. Lieutenant-Colonel J. F. Maclaran has been selected for appointment as an Ordinary Fellow of the Allahabad University. Lieutenant-Colonel W. Ronaldson Clark has arrived home on leave of absence from India. H.E. the Governor of Bombay in Council has been pleased to appoint Lieutenant-Colonel B. B. Grayfoot to be Civil Surgeon at Karachi, in succession to Major H. Bennett on deputation. Lieutenant-Colonel C. H. L. Meyer has been granted three months' leave of absence.

Major W. D. Hayward has been selected for appointment as Medical Storekeeper to Government in the Madras Presidency during the absence on leave of Major W. G. Richards. Major S. A. Harriss, officiating Sanitary Commissioner in the United Provinces of Agra and Oudh, has been confirmed in that appointment. Major G. Y. C. Hunter has been granted four months' extension of his leave of absence. Major G. T. Birdwood, civil surgeon at Lucknow, has been appointed to hold Medical Charge of the Rae Bareli District during the absence of Captain J. C. Cameron on deputation duty at the Central Research Institute, Kasauli Cantonment. H.E. the Commander-in-Chief in India has been pleased to appoint Major A. N. Fleming to be Specialist in Ophthalmology to the Ninth (Secunderabad) Division.

Captain J. Morison has been appointed to the Bacteriological Department by the Government of India. Captain F. F. Strother Smith and Captain W. D. Keyworth have arrived home on leave of absence from India. Captain W. D. Wright has been appointed to hold charge of the Plague Prevention duties at Azamgarh District in addition to Ghazipur District during the absence on leave of Captain T. D. Murison. The services of Captain C. L. Dunn have been placed at the disposal of the Lieutenant-Governor of the United Provinces of Agra and Oudh by the Government of India for appointment as deputy Sanitary Commissioner, vice Major J. C. Robertson. Captan J. Lee, civil surgeon at Dinajpur, has been granted six months' leave of absence on medical certificate. Captain E. J. C. McDonald has been appointed Supernumerary Medical Officer in Assam and posted to Dibrugarh. The appointment of Captain J. F. James to officiate as Civil Surgeon at Goalpara has been cancelled. Captain D. C. V. Fitzgerald has been granted four months' extension of his leave of absence. The services of Captain W. J. Collinson have been placed temporarily at the disposal of the Lieutenant-Governer of the United Provinces of Agra and Oudh for employment on plague duty. Captain E. C. Taylor, officiating second class agency surgeon, has been appointed Civil Surgeon at Kurrael. Captain A. S. Leslie, superintendent of the Insein Central Jail, has been transferred to hold charge of the Rangoon Central Jail, in succession to Captain H. H. G. Knapp, granted leave of absence. Captain H. H. Broome, professor of anatomy at the Government Medical College, Lahore, has been granted furlough for six months, with study leave for six months in continuation. On transfer to the Central Provinces, Captain A. E. Grisewood has relinquished his appointment as Plague Medical Officer at Delhi. Captain H. W. Pierpoint has been appointed Civil Surgeon in the Khyber Agency and Medical Officer to the Khyber Rifle Regiment. The services of Captain A. M. Jukes have been placed temporarily at the disposal of the Government of Bengal for employment in the Sanitary Department.

Lieutenant T. L. Bomford has been appointed to officiate as Surgeon Naturalist to the Marine Survey of India, vice Captain R. B. S. Sewell.

TERRITORIAL FORCE.

Royal Army Medical Corps.

Notts and Derby Mounted Brigade Field Ambulance, Royal Army Medical Corps: Lieutenant Alexander M. Webber resigns his commission (dated Oct. 12th, 1912).

3rd West Riding Field Ambulance, Royal Army Medical Corps: Major Frederick A. Hadley is seconded under the conditions of paragraph 114 of the Territorial Force Regulations (dated Sept. 9th, 1912).

Attached to Units other than Medical Units.—Major John O. Wilson resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated Oct. 12th, 1912).

For attachment to Units other than Medical Units.—Hastings Footman Everett to be Lieutenant (dated Sept. 17th, 1912).

THE MILITARY SURGEON.

The *Military Surgeon* (Washington, D.C., U.S.A.) for September opens with a thoughtful article by Surgeon F. M. Bogan, U.S. Navy, on the Prophylaxis of Venereal Disease. He discusses the causes which lead men to risk infection when on leave, and arranges them in order thus: lack of amusement, intemperance, discrimination against the uniform, ignorance, and lack of restriction of the diseased. The better class restaurants, even in the land of liberty, the United States, will not admit men in uniform, hence the men are driven to other places of resort, with worse company. He proposes to teach the men the risks which they run when they expose themselves to infection, and to make the man infected a pariah in order to protect and warn the others. He proposes to teach "the child" sexual hygiene. California and Vermont have made venereal diseases compulsorily notifiable without names, he says, but does not say how notification is enforced. Surgeon Bogan gives further statistics showing the practical success of prophylaxis in the United States Navy: in his ship there were 35 cases in three months before prophylaxis; but when that was established in the next three months, consecutive to the others, there were but two cases, and neither had attempted to protect himself. On the Asiatic station of the United States Navy prophylaxis when first introduced, permissively, reduced the admission of fresh cases by 20 per cent. He states that prophylaxis is compulsory in the German, French, and Japanese navies. Captain L. L. Smith, of the Medical Corps, U.S. Army, discusses the differential diagnosis of dementia præcox and chronic alcoholism; the memory defect of the alcoholic is the most marked early discriminating evidence, but at first both diseases are very similar. Passed Assistant Surgeon R. E. Rigg, U.S. Navy, has a most suggestive paper (a pity it was not presented with fuller detail), in which he mentions a persisting typhoid prevalence in a ship of war, spread, he alleges, by cockroaches, and terminating at last when they were attacked and extirpated. From the bodies of the earliest cockroaches caught there were cultured a typhoid-like organism and the streptococcus erysipelatis (they had an erysipelas case on board at the time). Here is a new way, perhaps, to explain the cases of typhoid fever which kept on occurring in H.M.S. *Scylla* in the West Indies four years ago. He also thinks that typhoid fever may be spread by bed

bugs. Captain E. D. Kilbourne, Medical Corps, U.S. Army, reports on a measles epidemic which has lasted 18 months at a recruit depôt and is still proceeding. He discusses 600 cases, of which 30 died, chiefly in February and March (24), and 25 of these died from broncho-pneumonia. The disease is infectious before the rash, before Koplik's spots appear, and they diagnosed it in contacts by the coryza, cough, or conjunctivitis. Cases were discharged as soon as convalescent, and they carried no infection with them. Barracks were not disinfected—that does no good; measles does not spread by fomites. The well-known Public Health and Marine Hospital Service is to be called in future "The Public Health Service." It is to be officered by a Surgeon-General (£1200), Assistant Surgeon-General (£1000), ten Senior Surgeons (£700), Surgeons at £600, Passed Assistant Surgeons (£480), and Assistant Surgeons at £400. Most can get an increase of 10 per cent. of the above salary for each five years' service. We congratulate the Public Health Service on its new name and increased salaries and wish it greater success than ever. It may be worth while to state some of its duties. It watches immigration, providing inspectors of immigrants both at home and abroad—for example, in Liverpool; it takes charge of quarantine, providing health officers and hospitals at the ports; it studies epidemics on the spot and in the laboratory; and its officers are sent wherever they are wanted. When plague appears at Porto Rico an officer is sent there; another to New Orleans, where a plague-infected rat was found on July 27th (but none since); others are supervising the destruction of ground squirrels in California; while others, again, are watching lest epidemics break out in the flooded Mississippi valley. Regretfully we again note that Passed Assistant Surgeon T. B. McClintic, of this service, died on August 13th from Rocky Mountain (spotted) fever, contracted while investigating the disease—another medical martyr to science. The first set of regulations for the American National Red Cross Society when working with the navy are here published at length.

YELLOW FEVER AND THE INDIAN PORTS.

It is notified in the *Calcutta Gazette* that Major A. C. MacGilchrist, I.M.S., is placed until further orders on special duty to investigate the prevalence of stegomyia in the Port of Calcutta.

CHINESE TROOPS IN INDIA.

Captain R. A. Needham, I.M.S., health officer, Simla, has been placed on deputation under the military authorities in connexion with the passage of the returning Chinese troops from the frontier to Calcutta, and will leave Simla at once for Sikkim.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The October issue of this journal opens with a Preliminary Note on Immunisation against B. Paratyphosus A, by Major S. L. Cummins and Major C. C. Cumming, who are at present conducting experiments with a bi-valent emulsion of B. typhosus and B. paratyphosus A. The present paper, however, does not anticipate the final conclusions of this research, but the matter is only brought forward because it appears to throw an interesting sidelight on some of the clinical findings in paratyphoid A fever, and because it may also be taken to show that the question of prophylaxis against this disease is more complex than might at first sight appear to be the case. It may also emphasise the necessity of a thorough experimental basis before an anti-paratyphoid A vaccine is finally recommended for the use of troops. The Treatment of Gonorrhœa and Some of its Complications is the subject of a joint contribution by Major L. W. Harrison and Lieutenant C. H. H. Harrold, in which they show that while there is no royal road to success in the treatment of this disease, much may be done to shorten the stay in hospital and prevent complications and relapses by attention to detail. An interesting article on Water-bottles and Mess-tins, by Captain N. Dunbar Walker, describes the evolution of these articles in this and other countries, and concludes with a summary of the use of aluminium. In "Sunstroke—a Heresy," Major W. H. Ogilvie, I.M.S., compares sunstroke to heatstroke, and pleads for criticism of his ideas; and Colonel S. C. B. Robinson and Major R. J. Blackham write on Sand Flies and Sand Fly Fever on the North-West Frontier of India. Other interesting notes deal with the adaptation of motor taxicab "chassis" for the carriage of wounded, a method of regulating the temperature of intravenous injections, a camp latrine, and a device for suspending the straps of the valise equipment, 1882 pattern.

Permission has been granted to Major H. S. Anderson, R.A.M.C., by His Majesty the King to wear the medals commemorative of the earthquake in Sicily in December, 1908, which have been conferred on him by the King of Italy and the Italian Red Cross Society in recognition of the services rendered by him on that occasion.

Correspondence.

"Audi alteram partem."

THE AWARD OF THE NOBEL PRIZE TO DR. ALEXIS CARREL.

To the Editor of THE LANCET.

SIR,—Perhaps one of the most gratifying things that could have happened to the medical profession is the recognition of Alexis Carrel's magnificent work by the bestowal on him of the Nobel Prize. To me Carrel's career is typical of the intense desire to progress which pervades America, Frenchman though he may be by birth. The American man of science devotes himself heart and soul to his work, feeling that in that country merit is the only road to success, and that if he does succeed he commands the love, esteem, and admiration of his fellows in a manner that may not exist in the more complicated conditions of the old world.

To those who know Carrel's charming personality, his wonderful manipulative dexterity, his extraordinary originality, his calm determination, and last, but not least, his extreme modesty, this honour did not come as a surprise, but has afforded them the highest satisfaction. As a great man should, but as, alas, all great men do not, Carrel has ignored the many scurrilous attacks which have been made upon him personally and on his methods by the ignorant and timid. But if Carrel has detracting critics he has also enjoyed the most enlightened sympathy which American science can afford. In recognising Carrel's genius one must not forget, among others, Simon Flexner, the Director of Laboratories of the Rockefeller Institute for Medical Research, who by his great learning and most keen intelligence has counted largely in affording to Carrel an opportunity to arrive at the summit of his ambitions. The more one sees of America the more is one struck by the determination of the members of its medical profession to occupy the van of progress by rendering themselves familiar with any advance in science and by combining among themselves to ensure a very high and progressive standard of knowledge.

America has every reason to be proud of its capacity to present to the moving spirits of the world a soil in which they can grow with uninterrupted—nay, stimulated—vigour, and where merit and genius receive a recognition unequalled, I believe, elsewhere. Carrel is a typical product of these conditions.

I am, Sir, yours faithfully,

Cavendish-square, W., Oct. 13th, 1912. W. ARBUTHNOT LANE.

UNIFORMITY IN MEDICAL REPRINTS.

To the Editor of THE LANCET.

SIR,—I have read with much pleasure Dr. W. Blair Bell's excellent suggestion with regard to medical reprints, and have often expressed a wish that something could be done to obtain uniformity in these, as every reading medical man must appreciate what a boon it would be if this idea could be realised.

I may add that the size adopted for the "Proceedings" of the Royal Society of Medicine was the result of prolonged and very careful consideration and comparison, and I think there is no doubt that it has given general satisfaction, providing as it does a large enough page for illustrations, without being too large for "handiness."

Dr. Blair Bell's suggestion for an extra $\frac{1}{4}$ in. is quite unnecessary, for all that need be done is to order the reprints with *uncut edges*, and this would leave quite enough a margin for cutting down by the binder.

I am, Sir, yours faithfully,

Wimpole-street, W., Oct. 11th, 1912. J. Y. W. MACALISTER.

THE CHEMICAL EXAMINATION OF GASTRIC CONTENTS.

To the Editor of THE LANCET.

SIR,—In THE LANCET for Oct. 5th there is an article by Dr. A. S. Woodwark and Mr. R. L. Mackenzie Wallis on the Relation of the Gastric Secretion to Rheumatoid Arthritis. I should like to make a few remarks on the methods used for the examination of the gastric contents, and shall base them, firstly, on the results given of a "normal" case in Table II., which is used as a standard for comparison.

1. The "free hydrochloric acid" is recorded as 0·02 per cent. This is estimated by Volhard's method, which depends on the theory that when gastric contents are evaporated to dryness all the free HCl is volatilised. Willcox has shown that about one-third or less is driven off, and anyone can confirm his observation by the use of Witte's peptone and a solution of HCl. A definite proof may be given of its inaccuracy. The most reliable methods for the estimation of free HCl are those which measure the acceleration of the inversion of cane-sugar and the catalysis of methyl acetate. By such methods the amount of free HCl in a normal case is found to be in the neighbourhood of 0·10 per cent., and in abnormal cases Dr. P. N. Panton and I[1] have found as much as 0·30 per cent. By Volhard's method it is extremely rare to find more than 0·07 per cent. in any condition, and normal cases appear to give about 0·02 per cent. The method is thus extremely inaccurate, and is in no way a measure of the amount of free HCl present.

2. The "protein hydrochloric acid" is recorded as 0·23 per cent. This is also estimated by Volhard's method, and includes all the free HCl not volatilised in the first stage. Thus it includes some two-thirds of the free HCl. It is thus no measure of the amount of HCl combined with protein.

3. The "active hydrochloric acid" is recorded as 0·25 per cent. This is the sum of the free and protein-combined HCl. Willcox has paid special attention to this estimation, and it has the advantage of eliminating the error due to the incomplete volatilisation of free HCl. Let us consider the substances which may be included in the "total acidity" in any case. They are free HCl, protein HCl, organic acids, acid phosphates, and free phosphoric acid. Now it has been shown in the article already referred to that phosphates are only present in traces in cases where the acidity is normal or above normal. In these cases organic acids also are present only in very small amount as a rule. Hence in such cases the total acidity and the "active hydrochloric acid" may be expected to be identical within the limits of experimental error. Reference to Dr. Willcox's tables shows this to be so generally. Hence the estimation of "active HCl" in such a case appears to be superfluous. In cases where free HCl is absent, it can be proved that an error exists in this method of estimation of "active HCl." This is best shown by instances in which definite dimethyl acidity is present together with a negative Günzburg reaction, the latter proving that there is no free HCl.

As there is no test meal in Dr. Woodwark's article to illustrate this point, I will quote two from the paper referred to above:—

1. Total acidity = 0·215. Dimethyl acidity = 0·091. Günzburg's reaction negative. Active HCl = 0·171.	2. Total acidity = 0·255. Dimethyl acidity = 0·105. Günzburg's reaction negative. Active HCl = 0·222.

As in these cases there is no free HCl, the "active HCl" should consist entirely of protein-hydrochloric acid. Since dimethyl only measures free acids the amount of protein-combined acidity in the first case cannot exceed 0·215 less 0·091—i.e., 0·124—and in the second case 0·255 less 0·105—i.e., 0·150. The protein-acidity must in reality be less than this, since dimethyl is not a complete measure of acidity due to organic acids. Yet Willcox's method gives an "active HCl" amounting in the first case to 0·171 and in the second to 0·222. These instances are exceptional ones in which the acidity is high, although free HCl is absent, but they are sufficient to prove that the estimation of "active HCl" is unreliable. Similar evidence may be obtained from less exceptional gastric contents.

What is the cause of this discrepancy? We have showed that gastric contents with a negative Günzburg reaction contain much greater amounts of phosphates than those with normal or increased acidity.[2] If a solution containing acid phosphates and sodium chloride be heated a loss of chlorides occurs. This is due to the continuous formation and volatilisation of minute quantities of hydrochloric acid in accordance with Thomsen's Law of Mass Action. This loss will be included with the "active HCl" by Willcox's and Volhard's methods. In some cases the acidity ascribed to "active HCl" may considerably exceed the total acidity. The presence of phosphates complicates all methods which depend on heating the gastric contents. The error will particularly occur in cases where free HCl is absent, as in these the phosphates are present in larger amounts.

The investigations are insufficient to show exactly how great is the influence of phosphates, but their presence and action appear to have been generally overlooked in the past. The estimation of "active HCl" is thus inaccurate when the acidity is low and is superfluous when the acidity is normal or increased. The estimation of "protein HCl" by Volhard's method is inaccurate in all cases.

4. The ratio of "active hydrochloric acid" to metallic hydrochloric acid is given as 357 : 100 in the normal case. Any inaccuracy in the estimation of "active HCl" will have a double effect on this ratio, as it will increase the "active HCl" at the expense of the metallic HCl. The ratio thus appears to be accurate when the acidity is at or above normal and inaccurate when the acidity is low or free HCl is absent.

All these estimations are therefore unreliable, since in some cases they are accurate and in others inaccurate.

5. Töpfer's reagent, dimethylamidoazobenzol, is not a test for free HCl but for free acids. The fact that it is positive is no proof of the presence of free HCl. The dimethyl acidity is due to free HCl, free organic acids, and any free phosphoric acid present. The organic acids are only partially estimated. Hence dimethyl acidity is a fairly accurate measure of the free HCl when the acidity is normal or high, since HCl is then the only acid present in any quantity. When the acidities are low and the other acids are present, the dimethyl acidity is the sum of the partial estimation of each. The determination of dimethyl acidity can be carried out in the same sample as the total acidity, and occupies less than a minute, and it is, at least, as valuable and accurate as the more complex and lengthy estimations.

The estimation of the total acidity with phenol-phthalein is constantly accurate. Günzburg's test is positive with free mineral acids, and may be relied upon to show the absence of free HCl. It is possible that when the test is feebly positive phosphoric acid is causing a complication.

It is on these two tests that reliance must mainly be placed in carrying out the chemical analysis of the result of Ewald's test meal. The dimethyl acidity may be added, as its estimation is so extremely simple. The more complex analyses can only be carried out in a laboratory and occupy considerable time, but the three investigations just referred to can be performed in any ordinary room in a quarter of an hour, and give all the information which can be gathered from the chemical analysis of an Ewald's test meal, apart from such questions as ferments.

I am, Sir, yours faithfully,

Devonshire-place, W., Oct. 10th, 1912. H. LETHEBY TIDY.

[1] Analysis of Gastric Contents, Quarterly Journal of Medicine, 1911.

PRURITUS ANI.

To the Editor of THE LANCET.

SIR,—With regard to this subject and the letters of Dr. D. H. Murray and Dr. W. F. Grant, whilst admitting, of course, that there may be cases of this troublesome and annoying ailment which defy all ordinary remedies both internal and external, it may be well to bear in mind that cleanliness, as practised universally by the natives of India, is a very powerful enemy to any germs or bacteria that may be concerned in the affection, and that consequently—at least, according to my experience of many years in both Northern and Southern India—it is very rare to meet with the condition save as a complication of diabetes. Last year I had an elderly patient under my care who was much annoyed by pruritus ani. He had no sugar in his urine and was

[2] Achylia gastrica is an exception to this.

otherwise in good health. In addition to the pruritus, he complained of a feeling of stickiness and discomfort after stool in the morning, which continued for the rest of the day, and at night when he went to bed his shirt and drawers were always soiled. Washing of the part with warm water containing some boric acid in solution after defæcation got rid of the pruritus, and it has not recurred under this now habitual and simple practice.

I am, Sir, yours faithfully,

J. D. RECKITT, M.D. Brux.,
M.R.C.S. Eng.

West Kensington, W., Oct 9th, 1912.

THE LIFE-CYCLE OF THE ORGANISM OF SYPHILIS.

To the Editor of THE LANCET.

SIR,—The paper by Mr. McDonagh in THE LANCET this week with the above title contains some very suggestive conjectures as to the life history of the recently observed protozoal parasite which inhabits syphilitics. But as I have had the privilege of seeing some of his specimens, and as I have also followed minutely the researches (noted briefly in the *British Medical Journal* of Sept. 28th, 1912) on the same subject by my brother, Mr. E. H. Ross, and Dr. J. W. Cropper, of these laboratories, I should like to point out that I think Mr. McDonagh has rather jumped to conclusions regarding several stages of the parasite in question. I do not think that he will assert that the deductions which he has made are quite justified by the facts supplied by his specimens or by anything that can be shown by Manson's method, but he is certainly right about some of his theories, which are based, as he acknowledges, on the work of Mr. E. H. Ross, who has worked out the life history of the homologous parasite of the guinea-pig, and who was the first to see and to show the development of the living intracellular human parasite into a spirochæte. Yet on other points Mr. McDonagh seems to have gone beyond the realm of obvious inference. The facts are as follows.

Two years ago, when examining the blood of a guinea-pig with the new jelly method of in vitro staining, the presence of a large protozoal parasite inside the lymphocytes was immediately demonstrated. These objects had been seen before with the older method, and were vaguely called "Kurloff's bodies," but until the jelly method was employed their exact nature was not appreciated. Mr. E. H. Ross worked out its life history with the jelly method, and discovered the important fact that this protozoon went through many stages and ultimately developed into free-swimming spirochætes. His researches were published in the Proceedings of the Royal Society, B, Vol. 85, the name lymphocytozoon cobayæ was given to the parasite, the white tumours which in some respects resemble gummata seen in the livers and spleens of the infected guinea-pigs were described, and the probability of the spirochætes being microgametes was suggested. At a later date Dr. J. W. Cropper discovered a similar parasite which also develops into a spirochæte in the cells of the vesiculæ seminales of earthworms; and his paper on the subject is in print in the Proceedings of the Royal Society. The next obvious step was to find out whether the so-called spirochæta pallida did not develop from a lymphocytozoon in the same way, and Mr. Ross discovered this intra-corpuscular parasite in the first and all subsequent cases of human syphilis which he has examined. By means of the jelly method, by which the parasite can be "spotted" instantly, and by which the cells can be stained alive and watched for some time, the development of the human parasite into a spirochæte was also demonstrated. In the course of this investigation Mr. Ross used to obtain material from the Lock Hospital, where he met Mr. McDonagh and told him about the development. Mr. McDonagh visited these laboratories and saw the complete cycle of the parasite of the guinea-pig and the earthworm. Those of Mr. McDonagh's specimens which I have seen undoubtedly show "splodges" or opaque objects in the cells which appear to be similar to those described by Siegel, Klebs, Losdorfer, Dohle, and Stassano several years ago.

His subsequent deductions, however, do not appear to tally quite with the phases of development originally seen in the guinea-pig or in man. For instance, there is no proof that the cycle commences with an infective granule or sporozoite. The parasite is frequently seen in the small lymphocytes and not only in the large ones. Watching the living preparations, there is no evidence that the protoplasm round the parasite is degenerate; in fact, the host-cells are quite active. There is no coil in the human parasite. The suggestion that the spirochæta pallida is a microgamete is not proven for human syphilis, and the spirochæte in the guinea-pig parasite was seen to conjugate for the first time by Dr. Cropper on Oct. 13th. The use of such terms as sporozoite or zygote at present in any connexion with this parasite is hypothetical. The name which he suggests, leucocytozoon syphilis is surely erroneous, because the parasites infect the lymphocytes of the lymphatics, peritoneum, and peripheral blood. In any case, we all think that it will be better to defer giving the human parasite a name until we have complete knowledge of its life history and absolute proof that it is the cause of syphilis.

I may add that Mr. E. H. Ross is publishing shortly a full account of the human parasite as actually seen with the jelly method, and its history. Dr. J. W. Cropper will also publish the observation of the conjugation between the spirochæte and the macrogamete of the guinea-pig parasite. The "females" are mostly to be found in the cells of the peritoneum.

I am, Sir, yours faithfully,

H. C. ROSS.

The John Howard McFadden Researches, London, S.W., Oct. 15th, 1912.

THE HUNTERIAN SOCIETY'S MEDAL.

To the Editor of THE LANCET.

SIR,—May we remind competitors for the Annual Silver Medal that the latest date for sending in essays for the present competition is Dec. 31st? The medal is given for the best essay by a general practitioner, embodying the results of his own observations. The competition is open to all registered general practitioners resident within Great Britain, Ireland, and the Channel Islands, whether Fellows of the Society or not. Full particulars may be obtained from us. We are, Sir, yours faithfully,

A. C. JORDAN, M.D.,
11, Bentinck-street, W.
O. K. WILLIAMSON, M.D.,
55, Upper Berkeley-street, W.
} Hon. Secs.

Oct. 10th, 1912.

THE MEDICAL PROFESSION AND THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—I think there are some fallacies underlying Dr. Major Greenwood's arguments *re* "M.D.'s" plea for payment by capitation. A whole-time Poor-law medical officer may, for instance, be paid a salary computed on the basis of the amount of work previously done in his district. Pauperism in that district may be reduced almost to the vanishing point at one period, through prosperous trade conditions and plentiful employment. This may, however, be followed the next year by some widespread epidemic, accompanied, perhaps, by a great strike or lock-out intimately involving the district, and resulting in increased pauperism and sickness, and thereby enormously increasing his work. Thus, whatever qualms of conscience he might have in drawing his salary during the very slack time, he will not think he had a sinecure during the busy year.

It would be the same in the case of a practitioner paid by capitation under the Insurance Act, who, however easily he might earn his money "for work not done" in the slack time, would know well that (just as the London fogs have returned lately, somewhat in their old form, when many began to believe they had left us permanently) another labour upheaval and an epidemic of influenza would disillusion him and those who wished to hit at him by "averages." Under either circumstance it would hardly seem a practical question to consider "the dignity of the profession to become the pensioners of the community and be paid wages they do not earn." Indeed, when dealing with such problems, many of us would like, in discussing the economic conditions of practice, to descend more to the realities of professional life.

I remember well, two or three years since (in pre-Insurance Act days), the coroner for the district in which Dr. Greenwood practises—a man as experienced as he is respected—stated

that he would be sorry to see the general practitioners deprived of their fees for inquests and post mortems, as he knew such payments often made the greatest difference in this district to many struggling practitioners in helping them to meet their everyday expenses. You can scarcely successfully formulate fine ethical propositions under conditions thus indicated.

But, important as this aspect of Dr. Greenwood's letter is, there is another side of it which must give many practitioners serious thought. Speaking of contract practice, with all the responsibility attaching to his representative capacity as a member of the State Sickness Insurance Committee of the British Medical Association, he states "the more it is curtailed the better for the profession and the public." This must strike many as a singular statement coming from one of the authors of the Public Medical Service—the most universal and gigantic scheme of contract practice ever before launched in Great Britain—a scheme which, if successful, would deal with more than double the number of those to be attended under the Insurance Act, and would include the bulk of the women and children of the working classes of this country. Indeed, it is no exaggeration to say that the vast majority of the practitioners in Dr. Greenwood's and all neighbouring East-end districts (and like localities elsewhere)—those who at present hold club appointments as well as those whose private practices are mainly amongst the workers—would, to make the scheme a success, have to hand over nearly every patient they now have, toe the line, and work it for all it is worth as, pretty well, their only means of livelihood. With such a feeble recommendation of contract practice in any form as Dr. Greenwood gives, no wonder many see failures and disintegration writ large in every line of it. Nor, still more is it to be wondered at that many, always bearing in mind the risks of labour strikes and the facility with which strike pay runs out, should have serious anxiety about the possibility of derelict and ruined practices—medical New Tipperaries, by the wayside—following in its wake.

When one comes really to consider the effect of the Act in such districts as these, my own experience of 24 years' practice in most of the poor localities in London inclines me to the opinion that of all the insured persons which we should have to treat yearly at contract rates about one-third never pay fees to doctors, another third possibly pay 2*s*. 6*d*. yearly, and the other third perhaps 4*s*., and for some at least it must be a good stroke of business to secure 6*s*. or perhaps 6*s*. 6*d*. from such persons in the future. There must, too, be some feeling of security in the contemplation of this payment to many doctors practising in east and south-east riverside districts, who during the late strikes, with their attendant poverty and destitution, could scarcely have paid their expenses if it were not for their club or other appointments. So, too, the deprivation of such appointments must now cause them heart-searchings as to their future. And this may still be further emphasised by some calculations which have been made as to the number of insured persons whom the practitioners of Stepney would have on their lists if they decide to work the Act—though such figures cannot for the moment be verified—which points to the belief that each practitioner would have an average of 1000 insured persons, which at a *per capita* fee of 6*s*. clear would give each £300 a year, leaving then still as private patients the women and children of the workers which the Insurance Act, unlike the "Public Medical Service," does not touch. Nor, if the doctors like need they work this Act under a *per capita* system of payment, because the Insurance Commissioners, to please the exponents of so many ingenious systems for payment for work done, have, in the words of the renowned Father O'Flynn, given them all a "charmin' variety."

Now, Sir, faced as we are at the present by a situation of the greatest delicacy, it seems a pity that Dr. Greenwood and his colleagues do not turn their attention to the consideration of a compromise whereby to prevent the dangers of disunion and rupture which may soon overtake us. To this end the coming Representative Meeting might decide to work the Act for a stated period of two years, and call upon every practitioner to sign a pledge, before going on the panel, that he would at the end of that time resign his appointment if a Representative Meeting, specially called for the purpose, decided that the conditions of service were not satisfactory to the profession. By this means only can the profession be effectually organised to provisionally work the Act, and the Association saved from a serious disruption.

I am, Sir, yours faithfully,

Stepney, E., Oct. 15th, 1912. M. S. HARFORD.

To the Editor of THE LANCET.

SIR,—The *Times*, in announcing the publication of the regulations framed by the Insurance Commissioners, points out that they are of a technical character, and states that the remuneration which the Government is willing to pay per head is not announced. Therein lies their snare.

Upon referring to Clause 28 it is apparent that any figure which may be announced is not the amount which the doctors will actually receive. On the contrary, the pooled capitation fees will have to bear large deductions before they will be available for the purpose of medical remuneration. These deductions fall under three heads: (*a*) For drugs and appliances; (*b*) for mileage; and (*c*) cost of medical benefit for insured persons who are away from home.

The charge under (*a*) must be a heavy one. The chemists are to charge according to each item (which is right and proper), and it is unlikely that the sum required per head will be less than about 3*s*. 6*d*., which is the figure arrived at by comparison with 25 years of German experience. For mileage a varying sum must be set aside, a small proportion for a county borough, and a large one for a sparsely populated and scattered area. The charge under (*c*) would depend upon the nature of the population, and would vary considerably. In addition to these it is clear that there would be other charges on the fund for the special services, as defined in Schedule 1, Part 2; and for those "beyond the competence of an ordinary practitioner." (Schedule 1, Part 1, Section 2). These would include laboratory investigation, for which no other provision has been made. Deduct the charges for all these items from the agreed capitation fee, and there remains the sum available to pay the doctor. Could any arrangement be more unsound?

I am, Sir, yours faithfully,

J. WEBSTER WATTS,

Manchester, Oct. 15th, 1912. Secretary, National Medical Union.

THE NATIONAL INSURANCE ACT AND THE COTTAGE BENEFIT NURSING ASSOCIATION.

To the Editor of THE LANCET.

SIR,—My committee hope that you will find space in your columns for the following resolution passed Oct. 3rd, 1912.

I am, Sir, yours faithfully,

BERTHA M. BROADWOOD,
Honorary Secretary and Director of the Cottage Benefit Nursing Association.

Vauxhall Bridge-road, S.W., Oct. 14th, 1912.

[RESOLUTION.]

The committee of management of the Cottage Benefit Nursing Association desires to affirm that there should be close association between Approved Societies and duly recognised nursing associations for work under the National Insurance Act.

The committee of management recommends branches of the association only to supply * resident nurses to Approved Societies and Insurance Committees under the National Insurance Act at a rate that will cover expenses, which they consider will be found to be not less than £1 per week. Nurses should only be allowed to attend cases at the request of a medical man.

The committee of management further advises branches of the association which do not employ † district nurses to decline any subsidy which would involve a guarantee to undertake the nursing of all sick persons. Branches employing district nurses are advised to make the most favourable arrangement possible in their particular locality.

* The cottage resident nurse lives in the house of the patient, and the society or committee borrowing her would be responsible for her board, lodging, laundry, and travelling expenses, in addition to the weekly charge. † The district nurse does not live in the house of patients, but pays daily visits.

DONATIONS AND BEQUESTS.—The late Mr. J. L. Vardy, formerly house surgeon at the Royal Portsmouth Hospital, has left by will £1000 to the Bethlem Royal Hospital.—An anonymous gift of £6500 has been received by the Zenana Bible and Medical Mission.—A contingent reversion of over £40,000 has been bequeathed by the late Mr. C. S. Fairbank to Birmingham hospitals. In the event of the failure of certain trusts the General Hospital will receive £10,000 and the Queen's Hospital a similar sum, while the residue will be distributed among other Birmingham medical institutions.

THE FIFTEENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY AT WASHINGTON.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

(Continued from p. 1050.)

Washington, Sept. 30th.

The Basic Object of an International Congress of Hygiene.

THE Congress has terminated its labours, the chief difficulty having been that the immense majority of members did not in the least understand what these labours should have aimed at. Of the 2000 and more American members, probably not 100 had assisted at such an International Congress before. The only congress at all similar that has been held in the United States was that on Tuberculosis, which met here four years ago. The 14 previous congresses dealing with hygiene attracted so feeble an American contingent that the American members at each of them could be counted on the finger-tips. The impression seems to have grown that the great object was to have a large number of interesting papers read by able men, and that one or two of these papers should reveal some new discovery. Thus the claim made that infantile paralysis was due to the bite of a stable-fly became almost the *clou* of the Congress, as the Eiffel Tower—compared to a *clou* or nail—was the chief feature of the 1889 Universal Exhibition in Paris.

For this belief that it is an essential part of a congress to mark an epoch, by being the occasion of the first revelation to the world of a great scientific departure, there is an historical basis. At the International Congress of Hygiene which met in Geneva in 1882, M. Pasteur first revealed the fact that he had succeeded in producing an antidote to hydrophobia by attenuating the virus of rabies; and at the similar congress in Budapest in 1894 Dr. Roux first described the wonderful result he was obtaining with the use of his antidiphtheritic serum. Such pregnant announcements, however important in themselves, do not belong absolutely to the province of hygiene and sanitation, save as they belong to preventive medicine. No one can exaggerate their importance, nor will words ever suffice to express the world's gratitude to those who have made in the study of bacteriology such life-saving discoveries. It is of enormous if not of equal importance to be quite certain whether the stable-fly does or does not spread paralysis among children, for hygiene comes into action when it becomes necessary to deal with this fly, or to enact new laws with regard to the control and drainage of stables. But time should have been found for debates of larger scope than took place on this interesting topic, while no one can imagine that the huge mass of papers presented to this Congress, when they appear in ponderous volumes, is going to be read carefully by the legislators of some 30 nationalities, speaking as many different languages, and so will lead to the betterment of the races. Yet this is the basic object of an international congress of hygiene. These meetings should have their outcome in resolutions which should guide legislators. Congresses of this nature are not for scholastic lectures or pathological demonstrations primarily; they are a form of machinery devised to concentrate the convictions of a majority of experts upon certain reforms, so that their opinions can be directed with united and maximum force in the right directions. They have a double mission—first to collect such opinions upon questions which are still undecided, and secondly to organise manifestations which will promote the realisation of that on which there is a general agreement. A great deal of the first part of the work can very well be done without congresses—and here the discretion of the promoters of congresses should be far more carefully used—but for the second object collective demonstrations are indispensable. It is an undoubted fact that many eminent persons connected with these congresses look upon resolutions with disfavour. But this is not because the theory is wrong which expects them, but because the machinery is wrong which registers them. Votes are too often given in a very loose manner and without proper consideration, or without a sufficiently enlightened debate or due warning to the meetings of what the questions at issue are.

The Permanent Commission.

Such are the considerations that lead to the suggestion that, so far as the resolutions which were adopted at this Congress are concerned, their importance does not coincide with the immense amount of work done. The final meeting, which should have been arranged so as to duly emphasise the decisions taken, was held very early in the morning, lasted barely an hour, and was poorly attended. By half-past ten it was all over. The Permanent International Commission met at 9 o'clock the same morning, giving themselves only half an hour to accomplish any work, so that presumably they did not consider that much would be submitted to them. The creation of this Commission and the extent to which it really represents the Congress are matters that require elucidation. It was just 9.35 A.M. when the Permanent International Commission came on to the platform of the Continental Hall, in the fine building where the opening ceremony had been held. Dr. Henry P. Walcott, of Massachusetts, as President of the Congress, took the chair. He announced that the resolutions would now be read out, and committed here, I think, two irregularities. For, firstly, he said that the resolutions would be put to the vote without discussion, and, secondly, he took the vote only in English. Of course, it is not possible to hold a formal debate over the resolutions at the close of a Congress; questions may well be and are often asked, and when there is strong feeling upon any point a few words of explanation may be invaluable. In fact, some approach to a discussion has occasionally taken place, and the precedent, dating back some forty years, might well have been preserved, or the authority for its abolition stated.

Secondly, every resolution should be carefully translated into the three official languages of the Congress, and as far as possible they should be printed in advance in most languages. Should a dispute occur as to the meaning of a resolution, it is generally held that the French text settles the point. But on this occasion, with but one exception, there was no German or French text, so that, should the meaning of any resolution be interpreted in different ways by different nations, there is no text to settle the points in dispute. Surely such a position should not arise as the result of an International Congress. The chairman, however, read out only the English, and therefore an unofficial, version of the resolutions, and asked those who approved to say "Aye," all nationalities being expected to know the significance of this monosyllable. But few English-speaking members attended the final meeting, so that a majority of those who said "Aye" may not have understood what they were voting about.

The Resolutions.

The Division of Demography kept up the right traditions of these congresses. They passed five or six resolutions, which the Permanent International Commission merged into one; but this is only a matter of form. Demography ascertains conditions rather than deals with those conditions, and the resolutions from this division of the work would naturally be much simpler.

From the Division of Demography the following resolution was received:—

> The Congress desires that in every country statistics of birth, deaths, marriages, and divorces be published periodically, and, if practicable, annually.
>
> The Congress considers that States or large cities which publish demographic statistics need registrars or similar officers sufficiently trained in medicine and demography to interpret demographic statistics, especially those of the causes of death. The Congress desires that family statistics, including both children born and living, be gathered periodically in connexion with the census. The Congress desires, in connexion with the registration of births, information giving the order of births in families. The Congress desires that a commission be appointed to report upon the subject of uniformity in criminal statistics, and especially uniform nomenclatures.
>
> The Congress desires that the International Statistical Institute, at its meeting to be held in Vienna in 1913, be invited to cooperate in the examination of this subject. The Congress urgently desires that all demographers of the several countries pay special attention to the mortality statistics.

The following resolutions, which came up from the eight Sections of Hygiene, were unanimously endorsed:—

> From Section I.—Resolved, that the Congress approves the proposal made by the section on microbiology and applied parasitology, that an international committee be appointed to consider the methods of investigation, classification, and differentiation of the organisms of the colon typhoid group, with a view of securing greater uniformity in such

methods and of adopting a provisional standard of certain tests which shall be recommended for the investigation of organisms belonging to this group.

From Section IV.—Resolved, that for the important object of securing the highest degree of practicability in the notification, tabulation, and analysis of the official returns of occupational diseases it is recommended that such notification and returns shall be made in a uniform manner by international agreement.

Resolved, further, that such nations and States which do not as yet provide for compulsory notification of occupational diseases be urgently requested to do so at the earliest opportunity.

From Section VIII.—Whereas the medical departments of the several navies have no uniform methods of expressing morbidity and mortality statistics, and no nomenclature for causes of disability or any compilation and tabulation of returns; and whereas the international classification of causes of death and sickness should form a basis for securing uniformity in naval vital statistics; therefore,

Resolved, that the secretary general of the Fifteenth Congress is directed to communicate with the Governments of France, Russia, Great Britain, Japan, the United States, and such other nations as publish naval medical returns. That it is the sense of the Congress that each navy should designate naval medical representatives to confer and recommend uniform methods and details for expressing international naval vital statistics.

A resolution from the VI. Section of Hygiene was forgotten, and had to be presented at a later period of the proceedings. This resolution had been "typed" in the three official languages, and some time before the close of the meeting, but it was only read out in English. It is a thoroughly useful resolution and runs as follows:—

1. Resolved, that the disinfectants used in different countries should be controlled by a simple bacteria test, capable of being easily effected, and that a committee from this Congress confer with the committee of the International Congress on Applied Chemistry to define such tests.
2. Resolved, that the Permanent International Commission of the Congress on Hygiene and Demography be requested to appoint a committee of not less than five members to represent this Congress for that purpose.

Section VI. dealt with the organisation of public health administrations, with water-supply, drainage, disposal of sewage and refuse, ventilation, popular education in health subjects, alcoholism, with the control of food-supplies and milk, town planning and the construction of healthy dwellings—not to mention other extremely practical and urgent questions of a like category. The legislator or the municipal councillor called upon to vote on such questions would naturally turn for guidance to the resolutions adopted by a congress of several thousand experts representing 30 nationalities. Yet the most responsible section of the Congress, responsible because it dealt directly with issues that are before the Legislatures of most countries, contented itself with resolving that there should be easy uniform tests for disinfectants. Of course, the Congress did not suggest that all which States and municipalities have to do to keep abreast with the sanitary knowledge of the times is to standardise disinfectants, and nobody supposes that any congress could lay down rules by which to plan the cities of the future and ensure the perfect health of their inhabitants; but having all regard for the virtues of slow progression there must be a feeling that reform by resolution of this Congress will be a tardy affair.

A Permanent Bureau at The Hague.

The Permanent International Commission introduced a resolution of its own of some importance. It was as follows:—

Resolved, that the Fifteenth International Congress of Hygiene and Demography instruct the permanent committee of the International Congress of Hygiene and Demography to take all necessary steps for the creation of a permanent bureau for the international congresses in the future.

This is a valuable departure, and time might have been given for its discussion. We are not told who is to appoint this bureau, what will be its powers, why it should go to The Hague rather than anywhere else, and what are the international congresses it will deal with in the future. We do know that such a bureau does exist at The Hague for the international medical congresses and a report might well have been presented to the Washington Congress as to the satisfaction or otherwise given by The Hague Medical Congress Bureau. It may be a most excellent proposal, but 30 nations ought not to be committed to a proposal made without notice, when debate and questions are not allowed. It was explained to me personally that it was the desire of the Dutch to group round the great edifice at The Hague, where it is hoped that international arbitration will in the future deal with national disputes, all other permanent institutions which by bringing nations together made for universal peace. No doubt had this been explained, and with the eloquence such a subject should inspire, to a representative meeting of the entire Congress it would have evoked an outburst of enthusiasm which in itself would have constituted an impressive peace demonstration. But nothing of the sort. A few members of Congress, after they had been warned that there could be no discussion, were called upon to vote on a motion which perhaps they could not understand, and whose complex bearings were in no wise explained. If these congresses are to be of any use in guiding communities their decisions must be the result of serious consideration, and then of a free, well-organised, and thoroughly representative vote.

The Closing Scene.

Now came, once more, the procession of nationalities, but a good many representatives were absent. Those present spoke very briefly, and indeed there was no reason why they should have acted otherwise, unless they were prepared to invite some explanations, which many of the delegates thought might have been offered, especially on the absence of any arrangements for holding the next meeting. It turned out that no invitation had been received. This is unusual, and must have been embarrassing for the Permanent Commission, as generally there is a conflict of nations desiring the honour of welcoming the Congress; but on making inquiries I was able to ascertain that there had been a question of holding the next Congress in Russia, and that a cable had been sent to inquire whether an official invitation was intended, but no reply had been received. Then an invitation from Brazil in proper order and official could have been obtained, but it was felt that it would not be wise to hold the Congress twice running at such a long distance from Europe. So the matter is left.

Dr. HENRY P. WALCOTT, in a few feeling words, closed the Congress. He thanked the participants for their attendance and for reading papers that contained much which was likely to benefit mankind.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Port Sanitary and Hospitals Authority: a Year's Work.

THE last meeting for the municipal year of the port sanitary and hospitals authority of the Liverpool city council was held on Oct. 10th. A vote of thanks was passed to Mr. John Utting for his services as chairman. Mr. Utting, in reply, gave some details of the committee's administration during the year. In regard to the sanatorium wards, he said that 186 patients were admitted to those at Fazakerley and 139 to Parkhill Hospital. The wards had been used to their fullest capacity, and patients had had to wait a considerable time in many cases before they could be admitted. There was no doubt that the accommodation offered by the committee met a real need. The popularity of the wards was obvious when it was considered that during the period under review upwards of 800 applications for admission were received and specially inquired into. Patients discharged from these wards during the last two years had been kept under observation as far as possible, and in the majority of cases a continuance of the improvement of the patient's health had been noted. With the advent of the sanatorium benefit under the National Health Insurance Act the committee made arrangements to provide institutional treatment for such cases as were authorised to receive it by the Insurance Committee. By Sept. 30th, 1912, 14 such persons had been admitted to the sanatorium wards. At the present date, 24 "insured persons" were obtaining sanatorium benefit at the hands of the committee. These were all paid for by the Insurance Committee at the rate of 25*s.* a week. To meet the growing demand for sanatorium treatment in respect to insured persons, 25 additional beds had recently been provided at Fazakerley, whilst at Parkhill a new ward containing 40 beds would be shortly available. The total number of patients treated in the city hospitals (civic) was 5506. The port sanitary officials had inspected 6221 vessels and canal boats, and 16,714 persons on incoming ships were examined. During the year 222 cases of infectious disease were landed in Liverpool, and there had occurred on board Liverpool bound vessels 11 cases of plague, 30 of cholera, and 38 of small-pox. Some 3600 rats had been caught on vessels arriving from infected ports, and

those from one vessel were found to be affected. The following quantities of meat had been condemned: 572 tons of beef, mutton, and pork; 100,000 pieces of offal; 49,989 tins of canned fish, meats, and fruits; about 500 tons of green fruit and vegetables; and several hundred tons of grain.

Liverpool Medical Institution: Inaugural Address by the President.

A meeting of this institution took place on Oct. 10th. Mr. Robert Jones, the President, and senior surgeon to the Royal Southern Hospital, delivered his address on the Treatment of Fractures. Mr. Jones discussed the conclusions arrived at by the recent commission on fractures, and regretted that the results of treatment to-day were not more satisfactory. One of the causes of failure was the ever-increasing demands made on our hospitals, rendering it almost impossible to give beds to fracture cases for a sufficient length of time. The methods employed by Mr. Jones were indicated and especial emphasis was laid on the importance of the line of the limb being correctly maintained, and on the use of continuous extension. In explaining the use of retentive apparatus Mr. Jones alluded to the debt he owed to his uncle, Mr. H. O. Thomas, the inventor of the splints known all over the world. The operative treatment of fractures was dealt with in a lucid and graphic exposition. The vote of thanks was proposed by Dr. W. Carter and seconded by Dr. T. R. Bradshaw, the oldest and youngest past-presidents. It was given with acclaim by a very full meeting, the nationality of the President perhaps accounting in part for the large attendance of Welsh members. The President entertained the members of the society after the meeting at supper, which was followed by some excellent Welsh choral music.

St. Luke's Day Medical Service.

The annual service for the members of the medical profession of Liverpool and district will be held at St. Luke's Church on Sunday next, Oct. 20th, at 3 P.M. The sermon will be preached by the Bishop of Exeter (Dr. A. Robertson). Seats in the nave will be reserved for the medical profession. The members are invited to wear academic costume; but it is trusted that those not wearing robes will not be deterred from attending, as all are equally welcome. Ladies are invited to be present. The offertory will be devoted to the Royal Medical Benevolent Fund. The Bishop of Liverpool will also take part in the service.

Oct. 14th.

BRISTOL AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Bristol Medico-Chirurgical Society.

AT the annual meeting of this society Mr. C. A. Morton resigned the chair to Dr. Walter C. Swayne, who delivered his inaugural address, taking the Present Position of Medical Education as his subject. The secretary's annual report was presented by Dr. J. A. Nixon, whose retirement from the secretaryship after six years' admirable work was received with regret. Mr. A. J. Wright was elected to succeed him. The membership of the society is 160, and the year begins with a balance in hand of £77. The report of the editorial secretary of the *Bristol Medico-Chirurgical Journal* was noteworthy because it contained the unwelcome news of Dr. R. Shingleton Smith's retirement from the editorship, an office which he has filled with signal success and untiring energy for 21 years. Dr. Shingleton Smith was the first secretary of the society, and was, indeed, largely responsible for its foundation. The report of the honorary librarian showed that the library, which is owned jointly by the society and the University, contains nearly 23,000 volumes and receives regularly 249 periodicals.

Charge against a Bristol Midwife.

An extraordinary charge was made against a midwife at the Bristol police court on Oct. 10th. Evidence stated that the woman attended a confinement recently, the child being stillborn. It was arranged that she should take the infant's body away and have it buried in the usual manner in which stillborn children are interred. The midwife was paid 5*s.* for the confinement and 2*s.* 6*d.* each for registration and burial fee. It was alleged that the woman had burned the stillborn child in a fire in her own house. The midwife is said to have told the mother that the infant, which was a female, had been dead for some days. Evidence was given that neither the birth nor the death of the child had been registered. The case was adjourned.

Radio-active Springs at Clifton.

Considerable interest has been aroused by the announcement of two local analysts that the spring water of the old hot wells at Clifton contains a percentage of radium which, it is suggested, will compare favourably with that of Bath. The springs, which are the property of the Society of Merchant Venturers, attracted a large and fashionable *clientèle* in the seventeenth and eighteenth centuries, but nothing has been done of late to rescue the spa from the disrepute into which it fell about 100 years ago, if the steep cable railway erected by Sir George Newnes to connect the higher parts of Clifton with the wells be excepted. So far no organised attempt at advertising the spa has been announced, but something of the kind will probably be done.

Poor-law Conference at Plymouth.

The annual Poor-law conference for the south-western district (comprising the counties of Cornwall, Devon, Dorset, Wilts, and Somerset) was held at Plymouth recently under the presidency of Sir Thomas Dyke Acland. The President, in his address, spoke on the rural housing of the poor, and stated that he believed a drastic solution of this problem would reduce pauperism. Mr. J. Dury read an interesting paper on the Use and Abuse of Workhouse Infirmaries, Old-age Pensions, and the Poor-law. He alluded to the excellence of many Poor-law infirmaries, and said in Liverpool the workhouse infirmary contained more beds than all the voluntary hospitals in that city. A considerable discussion took place over the probable effect of the Insurance Act on Poor-law relief. Mr. H. Hopkins suggested that there might be a saving on the salaries of their district medical officers, and on the maternity benefit of 30*s.* he considered that the first charge upon the money should be the procuring of a good midwife.

Pediculosis in Devon.

At the last meeting of the Devon education committee Mr. G. Adkins, the medical officer of health of Devon, in his report on the medical inspection of school children, stated that in the Axminster district in 22 schools 59 per cent. of the school children were found to be verminous. He remarked that the same proportion was found in the county when the nurse made her first visit and inspected the children, but now the ordinary pediculosis rate for the county was 6 or 7, counting male and female children together.

Devonshire Butter.

There has been a considerable amount of discussion for some time past on the question of Devonshire butter, and at a farmers' meeting, held at Tiverton on Oct. 8th, it was reported that the Board of Agriculture is sending an inspector to inquire into the matter of Devonshire butter being mixed with foreign and colonial butter, and sold as "Devonshire butter."

"An Enormous Increase of Salary."

The Bridgwater (Somerset) board of guardians has recently, with the approval of the Local Government Board, increased the salary of the workhouse medical officer from £65 to £150 per annum. The reason for the additional remuneration was to enable the medical officer to defray any extra expense that might be incurred owing to extra medical assistance in operations, &c. Some of the guardians objected to the "enormous increase" of the salary, and at the meeting of the board held on Oct. 9th an unsuccessful effort was made to rescind the resolution authorising the increased payment.

New Workhouse Infirmary for Gloucester.

At the last meeting of the Gloucester board of guardians a tender was accepted for £24,457 for the erection of a new workhouse infirmary. The new building will contain 149 beds, and the furnishing and other outlays will raise the amount to be expended to about £30,000.

The Prevention of Consumption in Gloucestershire.

The Duchess of Beaufort formally opened recently the Gloucestershire Tuberculosis, Nursing and Cooking

Exhibition, which was held at the Shirehall, Gloucester. Dr. I. Middleton Martin, principal mover in the organisation of the exhibition, explained its origin and scope.

Oct. 15th.

WALES.

(FROM OUR OWN CORRESPONDENT.)

Tuberculosis in Wales.

THE executive committee of the Welsh National Memorial has actually received nearly £190,000 towards the £210,000 promised to the campaign fund started by Mr. David Davies, M.P., who anticipated that £300,000 would be required. At a recent meeting of the committee it was stated that all cases so far recommended for sanatorium treatment were being dealt with. Until the end of the year the travelling expenses of all patients to sanatoriums will be paid from the memorial funds, where such payment is recommended by Local Insurance Committees. At a meeting of the Swansea district committee of the Memorial, held on Oct. 9th, and again at the meeting of the Swansea board of guardians on the following day, exception was taken to the fact that a distinction was being drawn in the schemes of the committee between pauper and non-pauper patients, both bodies contending that the memorial was a Welsh one for Welshmen without any distinction of class. The honorary secretary of the memorial pointed out that at least up to the end of the present year no distinction would be made, and that after that date contributions would be received from the approved societies with respect to non-pauper patients. It is expected that when the proposed sanatoriums are completed in North and South Wales there will be ample accommodation for pauper patients, who will be received at the cost of the boards of guardians responsible for their care. A report to the local Insurance Committee of Pembrokeshire states that there are in that county alone about 400 consumptive persons, most of whom would avail themselves of sanatorium treatment. The deplorable housing conditions in this county and the neighbouring counties of Cardigan and Carmarthen have been often commented on, and medical inspectors of the Local Government Board have from time to time reported on the unsatisfactory surroundings under which many of the inhabitants in the small towns and country districts live. In spite, however, of adverse criticism and of threats from the central authority the local authorities responsible for effecting a remedy move with leaden feet. At a recent meeting of the Tregaron Court of Petty Sessions, for example, several persons were charged with failing to comply with statutory notices served by the rural district council to abate certain nuisances connected with dwellings. In some instances the notices were served as long ago as last January; but the justices seemed to have so little sense of responsibility that they made no orders, and merely adjourned to a future sitting cases which had already been adjourned more than once.

Conditions of Labour among Tin Plate Workers.

The tin plate industry is a very extensive one in South Wales and Monmouthshire, about 96 per cent. of the mills in the whole of England and Wales being situated in these districts. The conditions under which the work is carried on have been the subject of inquiry on the part of the Home Office and as a result an important report has recently been issued by Dr. E. L. Collis, H.M. medical inspector of factories, and Mr. Hilditch, H.M. inspector of factories, who conducted the investigation. The inspectors concerned themselves chiefly with the process of tinning, which of late years has undergone many improvements but is still fraught with a certain amount of danger to the health of those who are engaged in it. Among the recommendations made for improving existing conditions are that there shall be an efficient exhaust draught wherever tinning is done, and that cleaning or dusting shall not be done except under such conditions as to prevent, as far as practicable, the escape of dust into the air where the work is being carried on. It is also suggested that the walls of every room in which the processes of tinning, cleaning, or dusting are carried on should be limewashed or thoroughly cleansed at least once every 14 months, and that there should be more frequent inspection than at present of dangerous machinery and exhaust ventilation in tin-plate works. In some works improved conditions are already in existence, and it is said that the workmen themselves complain far more of the "speeding up" required of them to increase the output than of the buildings in which they work.

Oct. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Edinburgh.

THE inaugural address by Professor J. Lorrain Smith, recently appointed successor to Professor W. S. Greenfield in the chair of Pathology, was delivered on Oct. 10th in the McEwan Hall before a large attendance of students and others, Principal Sir William Turner presiding. The subject chosen was the Place of Pathology in the Medical Curriculum, and the points specially emphasised were the essential relationship between the sciences of pathology and clinical medicine, the necessity of research in pathology, and the ease with which this could be assisted by the practitioner of medicine.—Following the retirement of Professor Greenfield the chairs of Pathology and Clinical Medicine will no longer be associated. The vacant chair in Clinical Medicine has not yet been filled, Dr. F. D. Boyd having been appointed to carry on the work for the present session.—The attendance at the post-graduate courses during the summer months was again very satisfactory. A new departure was the July course on diseases and defects of children, primarily intended for medical inspectors of school children and others. Considerable interest was also taken in the methods of the Edinburgh anti-tuberculosis scheme in view of the present legislation on this subject.—Dr. B. P. Watson, lecturer on midwifery and gynæcology at the Royal College of Surgeons of Edinburgh, has been appointed professor in these subjects at the University of Toronto.

Diphtheria in Edinburgh.

There was recently a well-defined outbreak of diphtheria in the east end of the city. The source was traced to the milk-supply, and the disease is now practically eradicated. In view of the importance of getting into touch with early and carrier cases the authorities have accepted the recommendation of the medical officer of health—viz., that throat swabs should be taken from the remainder of the household and from anyone who has been in contact with a patient, a fee of 1*s.* 6*d.* being paid for each such specimen.

University of Aberdeen: Opening of Session.

The session in medicine at the University of Aberdeen opened on Oct. 10th. Professor Ashley W. Mackintosh, the new professor of medicine at the University, gave his first lecture to the students, Principal George Adam Smith presiding. There was a large attendance of professors and others. The Principal said that before welcoming the coming they had to speed the parting guest. They followed Professor D. W. Finlay into his retirement with all good wishes for many years of health and happiness. The Aberdeen chair of medicine was the oldest foundation for medical teaching in Great Britain. He believed that Aberdeen was the only University in Great Britain in whose original charter or Bill founding the University were the words, "Nec non medicina." Professor Mackintosh was one of themselves. They were proud of him as a student, as a physician, and as a man. His election was welcomed by the whole profession, and he had no doubt from what he saw that morning that that welcome would be endorsed and emphasised by the great body of the students. Professor Mackintosh, on rising, thanked the principal for his all too kind words of introduction. It might very well be the ambition of the young Scottish students to become a professor; but to become a professor in one's own university was the highest honour of all, and he could assure them he was proud indeed of the post. With regard to his new office, the principal had mentioned the ancient foundation of the chair in Aberdeen; but he had not mentioned that in its original form the duties included instruction in all branches of medical education. Let them think what that would mean in the present day. He then paid a warm tribute to Professor Finlay before proceeding with his lecture.—At the half-yearly meeting of the Aberdeen University Court it fell to Principal Smith to welcome three new professors—Professor

Hendrick to the chair of Agriculture, newly founded, and Professor Mackintosh and Professor R. G. McKerron to the chairs of Medicine and Midwifery.

Sanatorium Benefit in Aberdeen.

A meeting of the public health committee of the Aberdeen town council was held on Oct. 12th. The Sanatoria Sub-committee of the Aberdeen Insurance Committee sent a deputation to discuss the question of payment on insured persons for treatment in the sanatorium wards of the City Hospital. A suggestion was made that meantime a mutual agreement might be come to, and the sum of 25*s.* per week per head was fixed, this payment to be subject to future consideration if necessary. With regard to reports on tuberculous cases, it was decided, in the event of the public health committee accepting the terms of the medical profession of making payment of 5*s.* for compulsory notification—plus a report—that the Local Insurance Committee should make a payment, to be afterwards fixed, to the public health committee. It was also agreed that should a medical officer on tuberculosis be appointed by the local authority, the Local Insurance Committee should pay part of the expense. No definite arrangement was come to as to the proportion to be borne by each party. This arrangement was also agreed to in the event of a dispensary being established.

Medical Service in Lewis.

The Highlands and Islands Medical Service Committee held a meeting at Stornoway on Oct. 11th, and took evidence as to the medical, sick nursing, and hospital provision in the Island of Lewis. Dr. D. Murray, medical officer of health and school medical officer, gave evidence as to public health and the health of school children. Mr. M. Mackenzie and Dr. A. Murchison gave evidence with regard to medical practice in the parish of Stornoway, while several lay witnesses also gave evidence. The advisability of readjusting the present medical areas, the almost universal inability of the people to pay anything like adequate fees, and the insufficient nursing and hospital accommodation were all discussed, as was also and especially the heavy burden of rates. There was cumulative evidence that if improvement is to be effected in existing conditions it must be by Government subvention. The rapid spread of phthisis in recent years and the impossibility of treating it satisfactorily in the insanitary surroundings of the patients, and consequently the urgent need of a sanatorium in the island, were also brought before the committee.

Oct. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Academy of Medicine in Ireland.

THE annual meeting of the Royal Academy of Medicine was held in the Royal College of Physicians on Friday, Oct. 11th. From the report of the General Council one learns that the number of fellows was 169, of members 27, and of associates 3. In the previous year the figures were—fellows 181, members 20, and associates 10, showing a reduction of 12 fellows and 7 associates, and an increase of 7 members. The total attendances at the meetings were 656, which is considerably less than the number (817) reported last year. The new president, Dr. Walter Smith, is a past-president of the Royal College of Physicians, King's Professor of Materia Medica in the School of Physic, and physician to Sir Patrick Dun's Hospital. His two most recent predecessors, Sir Charles Ball and Dr. F. Finny, were members of the staff of the same hospital.

The National Insurance Bill.

The trade unions of Belfast have communicated with the Parliamentary Committee of the Trade Unions Congress in London complaining that the workers of Ireland were excluded from the medical benefits of the National Insurance Act, and asking the assistance of the Committee in endeavouring to secure the inclusion of Ireland in those particular provisions of the Act. The Committee agreed, and, it is said, "not understanding why Ireland was excluded," resolved to send a deputation to meet Mr. John Redmond, M.P., to discuss the matter with him. It is announced that, as far as can be ascertained, the number of persons insured in Ireland under the Act is estimated roughly as 825,000, or 79 per cent. of the estimated insurable population. The Ancient Order of Hibernians claim to have registered 250,000 of that number.

Dispensary Doctors' Salaries.

On Oct. 10th, at a special meeting of the Ballymoney board of guardians, it was decided that the present salary of each of the seven medical officers be the initial salary for the office held by him, rising by increments of £5 for every five years' completed service to a maximum salary in each case of £30 in excess of present salary, this to be applied retrospectively. This scheme will only lead to a total immediate increase of £130, or 1-30th of a penny in the £ on the present valuation of the union. The Lurgan board of guardians, at a meeting on the same day (Oct. 10th), by 20 to 14 votes, refused to adopt a graded scale recommended by a special committee of their number who had carefully looked into the matter, although this was backed up by Dr. B. O'Brien, Local Government Board medical inspector, who was present, and who pointed out that the whole increase would not amount to 1-6th of a penny in the £.

Local Medical Committees.

The Irish Insurance Commissioners at first declined to recognise the Local Medical Committees (county or borough) on the pretext that as medical benefits did not apply to Ireland they would have to take legal opinion. As a result chaos has arisen, and, at last, the Irish Commissioners have made up their minds that without the help of such Committees the Act cannot be worked; and so they are going to recognise them. Instead, however, of asking the honorary secretaries of these Local Medical Committees to send them the names of those duly elected to serve on such Committees by the medical profession in each area (in order apparently to be strictly legal and in order to satisfy themselves that such Committees are "representative of the duly qualified medical practitioners,") they prefer to ask the secretaries to send not only the names of those on these Committees, but also the names of all the medical practitioners in each district. A note of warning is needed. If the Irish Insurance Commissioners attempt to alter any of these Committees properly elected by the profession, by refusing to recognise any names and by substituting others, as they did in the case of the Local Insurance Committees, the profession in Ireland, as a whole, will, I believe, absolutely refuse to give assistance.

The Belfast Medical School.

The winter session (1912–13) began on Oct. 15th at the University, when the various classes reassembled, the Royal Victoria Hospital beginning on Oct. 17th. At the University various new buildings in connexion with the Medical Faculty are in course of erection, but it will be another year before the new medical museum and the new science laboratories are completed.

Oct. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Compulsory Notification of Tuberculosis.

ON Oct. 1st M. Gaucher, in his report on epidemics to the Academy of Medicine, considered some of the conclusions in favour of the compulsory notification of tuberculosis, one of the most debated medical questions of the present time. It is undoubtedly the case, from both the sociological and the scientific standpoints, that the struggle against tuberculosis can be victorious only when each focus of infection is attacked as soon as it declares itself—i.e., as soon as each tuberculous person begins to discharge bacilli in his sputum. To isolate (as was formerly done with excellent results in the case of lepers) every person attacked with tuberculosis is not a possible measure in these days. But at least the endeavour should be made to establish around him a protected zone, by destroying, through the disinfection of his belongings, his dwelling, and his sputum, the microbes that he scatters broadcast in his environment. Among people in easy circumstances the vigilance, or at least the fears, of the patient's *entourage* may be counted on to undertake this task; but with regard to the country as

a whole, it is necessary that the disinfection should be compulsory, and it must be officially carried on at the home of the poor. To this end every tuberculous person with infected sputum should be notified to the authorities. Unfortunately, from the practical point of view, a thousand difficulties present themselves. This official notification and disinfection inflict on the unfortunate patient a visible stigma. No landlord is willing to accept him as a tenant. The medical man refuses to make the notification, and all the medical syndicates have arrived at very energetic conclusions on this point. The seal of professional secrecy is a positive obligation on the medical attendant, and, moreover, the patient would dismiss his medical attendant should he notify. It is impossible to compel the head of the family to notify; and further, if the medical man is silent it is impossible to find out the existence of the case. It is now some years since the Academy, after a long and heated discussion, hesitated to include tuberculosis in its list of compulsorily notifiable diseases. At the request of a Parliamentary group, presided over by M. J. Reinach, the Academy has referred the subject for further consideration. On Oct. 8th M. Letulle read a lengthy and closely reasoned report on the question, in which he declared himself in favour of compulsory notification, but he refrained from any suggestion as to who should be compelled to notify, which is the most important and difficult part of the problem.

Oysters as Food for the Tuberculous.

The benefit derived by certain tuberculous patients from the ingestion before meals of a small quantity of sea water is well known. Many, however, adopt this plan with reluctance on account of its bitter and disagreeable flavour. This difficulty may be overcome by the use of oysters, and M. J. Carles and M. B. Laquet strongly recommend it. Six large oysters, fresh or previously impregnated with sea water, contain in their shells from 55 to 60 grammes of this liquid. This amount closely approximates that usually prescribed. The clinical results thus obtained have been most satisfactory and quite comparable to those following the simple ingestion of sea water. Oysters taken before the meal in a few days bring about a manifest increase of appetite and improve the digestion. Like sea-water medication, they frequently induce an increase of the gastric juice. M. Carles and M. Laquet have demonstrated this in a large number of their patients by submitting them, before beginning the treatment, to a test-meal, and repeating the special examination after eight days of treatment. The oyster, therefore, is to be recommended for tuberculous persons whose gastric secretion is ordinarily inadequate. It is not merely a question of the sea water, of the albuminoids, fatty matters, carbohydrates, mineral salts, and especially the phosphates that enter into its composition. The oyster is a tonic of the first order and a complete food, most beneficial to weakened patients and those in whom appetite is deficient.

The Twenty-fifth Congress of the Association Française de Chirurgie.

The Twenty-fifth Congress of the Association Française de Chirurgie was opened on Oct. 7th in the large amphitheatre of the Faculty of Medicine of Paris, under the presidency of Professor Delorme, supported by the Director of Public Assistance and Public Hygiene of the Ministry of the Interior, the Director of Secondary Instruction of the Ministry of Public Instruction, the Doyen of the Faculty of Medicine, the President and Vice-presidents of the Academy of Medicine, the President of the Société de Chirurgie, and a large number of eminent members of the medical and surgical world. After the opening address, by Professor Delorme, on the Present State of the Practice of Surgery in War, and the report of M. Walther, the secretary-general, M. Moure read a report on the Diagnosis and Treatment of Cicatricial Stenoses of the Œsophagus. He defined the term, and spoke of the medical treatment, directed sometimes to relieving the dysphagia (opiate and bromide treatment), sometimes towards the improvement of the general condition of a cachectic patient, to fit him to undergo a surgical operation. He next discussed the surgical treatment by direct methods of dilatation—cauterisation (now abandoned), electrolysis, œsophagoscopic dilatation; or by indirect methods—œsophago-gastrotomy, œsophago-jejuno-gastrostomy, and restoration of the thoracic œsophagus. After a further communication by M. Guisez, a discussion ensued, in which M. Depage (Brussels), M. Baeckel (Strasburg), M. Forgue (Montpellier), M. Delagénière (Mans), M. Villar (Bordeaux), M. Jacques (Nancy), M. Vacher (Orleans), M. Bérard (Lyons) M. Reynès (Marseilles), M. Dujon (Moulins), M. Vianney (St. Etienne), M. Duvergez (Bordeaux), M. Termier (Grenoble), M. Hauser (Vienna), M. Roux (Lausanne), M. Froelich (Nancy), and M. Sargnon (Lyons) took part, in which all the speakers brought forward cases from among their own practice. M. Béclère, of Paris, and M. Mériel, of Toulouse, then made a communication on X ray exploration in surgical affections of the stomach, duodenum, jejunum, and ileum, and of the large intestine, and also an X ray study of the results. They concluded that X ray examination of the stomach and intestine gives the most satisfactory information as regards the seat, relations, shape, dimensions, and motor functions of each of these parts of the digestive canal. In the ensuing discussion M. Girard (Geneva), M. Destot (Lyons), M. Hartmann (Paris), M. Jonnesco (Bucharest), M. Michel (Nancy), M. De Quervain (Basle), M. Haller (Paris), M. Walther (Paris), and M. Dujon (Moulins) took part. The last question of the day was Coxa Vara. M. Froelich, of Nancy, who opened the discussion, divided his subject into essential coxa vara, static coxa vara, or that of adolescents, and symptomatic coxa vara. M. Kirmisson presented a communication on Coxa Vara in its relations with fractures and epiphyseal detachments of the upper extremity of the femur, which he has divided into fractures of the neck of the femur in childhood and in adolescence; epiphyseal detachments of the upper extremity of the femur; the relative frequency of such fractures and these epiphyseal detachments; the general symptomatology of injuries of the hip in children; and finally, traumatic coxa vara. He then discussed the treatment, both preventive and curative. Dr. Lejars, of Paris, made a communication on Atrophied and Painful Kidneys; Dr. Phocas, of Athens, one on the Inguinal Route in Operations for Hernia or Varicocele. M. Rochet and M. Thévenet presented some observations on the Renal Origin of Certain Calculi Formerly Considered Vesical. M. de Martel showed a closed mask for anæsthesia; M. Dupuy, of Frenelle, an apparatus for the treatment of fractures of the leg; and M. Judet an osteotome. Professor Kirmisson was elected president for the congress of 1913.

Inauguration of the Laboratory of Morphology at the Invalides.

M. Troussaint, director of the Army Medical Service, presided at the opening of the laboratory of morphology for the army, established on the initiative of M. Millerand, Minister of War. A large number of army medical men and other officers were present. The entire body of morphologists, with the chief of the school, were also present. The chief of the laboratory, Surgeon-Major Thooris, in a few words described the object of this new institution, and indicated the means by which the army could be benefited by the recent work in human morphology. M. Troussaint referred to the hopeful promise of an order of studies which can have such fruitful results in utilising the living forces of the nation, and paid a tribute to their originator. The French army will be the first to possess its own laboratory of morphology.

Oct. 14th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Seventeenth International Congress of Medicine: the National Committee of Hungary.

THE National Committee of Hungary for the Seventeenth International Congress of Medicine has been definitely constituted at a meeting held on Oct. 5th. The members of the committee are, according to the rules of the Congress, representatives of the Ministries, of the Faculties, of the Academy of Science, and of the greater medical societies of Hungary. Professor Emil de Grósz, Court Councillor, has been elected president of the committee. The Privat-docents R. Bálint and J. de Elischer, and head physician Dr. Ch. Jassniger are the secretaries.

Menstrual Irregularities Symptomatic of Tuberculosis.

Dr. Joseph Hollós has made a special study of menstrual disturbances, and his experience acquired during the past five years has led him to conclude that in the majority of cases menstrual irregularities are in fact toxic symptoms due to latent pulmonary tuberculosis. The importance of this discovery is very great both from a therapeutic and from a diagnostic point of view. The toxic phenomena in question consist of subjective signs and functional disturbances, such as headache, fainting, insomnia, nervousness, palpitation, vasomotor troubles, night-sweats, and pains in the joints. These disorders of menstruation may occur simultaneously with the symptoms of tuberculosis, but they sometimes precede the latter and are the premonitory signs of a latent tuberculosis. The most noteworthy among such disorders of menstruation is dysmenorrhœa, which may occur with the first menstruation, with toxic or other symptoms, pointing to the tuberculous origin of the malady. Dr. Gräfenberg, of Kiel in Germany, has already acknowledged the correctness of the theory of Dr. Hollós. He also recommends treatment for pulmonary tuberculosis in cases of primary dysmenorrhœa, but, on the other hand, he does not consider pulmonary tuberculosis to be the cause of secondary dysmenorrhœa. The cases relied on by Dr. Hollós, however, prove that there is no difference at all between primary and secondary dysmenorrhœa from an etiological point of view. During his search for the cause of disorders of menstruation Dr. Hollós made records of 712 cases. Pronounced dysmenorrhœa was observed in 270 cases. Out of these menstruation was painful from the very beginning in 138 cases, while in the other 132 the pains presented themselves only after one or more years. He found amenorrhœa in 64 cases. Treatment with tuberculin and other antituberculous remedies was given for at least two months to 188 women; of these patients 156 recovered to the extent that they were freed from menstrual disturbances, 37 were improved, and the condition of 24 was unchanged at the end of the treatment. During these observations the response of the clinical manifestations to the tuberculin and immune body treatment has led him to believe that in cases of tuberculosis the toxic symptoms which are present are dependent on a certain degree of the lytic immunity of the system. Somewhere in the organism, most often in the lungs or peribronchial glands, there is a formation of a focus or foci of latent tuberculosis, which foci slowly but permanently render the system immune by the action of their toxic product. This immunity is not, however, complete. In the various organs and also in the blood itself there is a circulation of toxins which irritate the nervous system and the different organs. By the increase of the "lytic immunity" the bodily sensitiveness to these toxins increases and the system begins to react on them. The various toxic symptoms and also the disorders of menstruation are simply the spontaneous reaction of the system—i.e., sensitiveness to poisons—against the chronic poisoning. On account of the immunity thereby established this condition may last for many years without any clinical evidence of pulmonary tuberculosis. If the original focus has in the meantime become completely non-pathogenic, then the toxic symptoms also completely disappear, especially if they have not lasted very long. In the latter case chronic changes which are capable of producing certain permanent symptoms may develop in some of the organs, as shown also by Poncet's school. Partly on the ground of pathological researches and partly by clinical observations Poncet and Leriche have come to the conclusion that in the etiology of all menstrual disturbances tuberculosis plays the principal part. They have been able to find local changes in the internal sexual organs in every single case of tuberculosis, and Poncet called this condition "tuberculose inflammatoire," meaning thereby chronic inflammatory changes, which, although of tuberculous origin, do not exhibit any of the macroscopic or microscopic specific lesions of tuberculosis. On the ground of these data Dr. Hollós recommends the application of antituberculous treatment in all such cases of dysmenorrhœa and other disorders of menstruation in which the etiological factor cannot be precisely ascertained, and in which, for the reasons already set forth, the physician is justified in concluding that a latent tuberculosis is responsible for the diseases in question.

Oct. 12th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Sanatoriums for Consumptives.

THE official report of the Swiss sanatoriums for poor consumptives (*Volksheilstatten*) for 1911 has just appeared in print. Eleven sanatoriums accommodate 860 patients. During the year 1911, 2052 patients were treated during more than four weeks. The average stay was four and a half months (132 days). 1635 patients, or 80·7 per cent., were discharged as improved; 364, or 18 per cent., showed no improvement; 28, or 1·3 per cent., died. Of the dismissed cases, 13 per cent. had fever; 87 per cent. were free from fever. The importance of treatment in as early a stage as possible is proved by the fact that in the first stage (Dr. Turban) 96·8 per cent. were improved, whereas only 85·3 per cent. in the second and 61 per cent. in the third stage were improved. The percentage of working capacity differed greatly according to the stages of the disease, being 88·5 per cent. in the first, 63 per cent. in the second, and only 36 per cent. in the third stage. The movement for founding special hospitals to accommodate incurable infective patients in the third stage is gaining ground.

Private Asylum.

On Oct. 19th a private asylum, Hohenegg, situated ten miles out of Zürich at an altitude of 540 metres, on a beautiful and isolated plateau in the midst of pasture and woodlands, will be inaugurated. It owes its erection to the efforts of a committee of six Zürich gentleman (chairman, Dr. Theodor Zangger) whose appeals for funds have been well responded to by the inhabitants of the Canton of Zürich. It fills a great want, as the public asylums are overcrowded and there is no proper accommodation for unruly first-class patients. £24,000 were contributed by voluntary contributions, £30,000 were advanced on mortgage. The asylum is to be self-supporting. The surplus payments of the first class, who pay 12*s.* to 15*s.* a day, are to cover the deficit of the second and third class, who pay 4*s.* and 2*s.* 4*d.* a day respectively. Five buildings have been erected to accommodate 110 female patients, and later on three more buildings will accommodate 110 male patients. Two experienced alienists, Dr. Escher, of Münsingen, and Dr. Miller, of Geneva, are resident physicians. There is a staff of 20 nurses.

Zürich, Oct. 12th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Open-air School in Florence.

A SMALL open-air school was started last spring on a piece of land, formerly a fruit garden, on the Viale del Poggio Imperiale, a shady road upon a hill on the south side of Florence. The initiative was due to the Società Fiorentina, Umberto I., Contro la Tuberculosi, and the realisation was made possible by the public spirit of the Commune, which agreed to treat the school as one of its own system and pay such proportion of the expenses as an ordinary school of the same size would involve. In addition, it made itself responsible for the rent of the land, about one or one and a half acres in extent, and made the few structural alterations necessary in the buildings upon it. The society made a grant of £82; with the addition of about an equal sum from other charitable sources the school has made a prosperous start, and is now, it seems, a permanent institution. Provision is made for 30 boys of from 9 to 11 years of age, drawn from the district of San Frediano, the poorest quarter of Florence. The boys are chosen by doctors from the Children's Hospital, and are selected on account of delicacy of constitution, previous illness, or unhealthy home surroundings. The school is situated some 10 to 15 minutes' walk from the centre of this district. School hours are from 9 to 4 in winter and 9 to 6 in summer. Only some four hours of this time are set apart for lessons, the rest being for recreation or gymnastics. On arrival a meal of bread and hot milk is served, each child having his own numbered cup. At midday they are given bread, meat, and

vegetables or macaroni, and at 4 in winter or 5 in summer a last meal, consisting in winter of bread and *salame*—that is, sausage or ham; in summer of bread and fruit. In fine weather work is done out of doors on a paved terrace, or the whole school may migrate for work or play on to the shady *viali* of the neighbourhood or further into the country. In wet weather they take shelter in a long room, originally the orange house of the fruit garden, almost entirely open on its south side by doors and windows. There is also a gardener's cottage on the land, where the caretaker lives with his wife. As to the results of the first four months' work, physically the children nearly all appear in the best of health, happy, and intelligent. The average gain in weight has been nearly 1½ kilogrammes, though one or two of the children have failed to respond to the change of environment and have actually lost weight. Educationally the experiment has been a success, 25 out of 28 children passing the required examination of the standard, while the proportion of successes in the ordinary schools is 70 per cent.

Ether by the Open Method.

To a vexed question of anæsthetics Dr. Giulio Dialti makes a contribution of some interest.[1] A young surgeon, he determined to decide for himself what is the best means of obtaining anæsthesia. In Italy all the text-books warn the student against the dangers of ether, with the result that it is but little used in this country. Dr. Dialti's experience as student and as assistant had made him diffident of chloroform and still more of spinal anæsthesia, so he determined to try the effects of ether. At first he made use of Galliard's mask, the large cone covered with waterproof material, using in some cases the "intensive," in others the "gradual," method. The first method he describes as an attempt upon the life of the patient; the second gave excellent results, both during and after operation, except in two cases, but these two cases out of 100 presented pulmonary complications, in one broncho-pneumonia, in the other pneumonia, and were quite sufficient to check enthusiasm for the method. He accordingly tried ether by the drop method—that is, given from a drop-bottle on to an ordinary Esmarch's mask, as for chloroform, and in 22 months administered ether by this method to 1000 cases of all kinds of operation, major and minor, with the most satisfactory results, and no pulmonary complication of any sort in any case. To avoid any risk of the possible chilling effect of the ether vapour upon the bronchial mucous membrane, Dr. Dialti wraps up the drop-bottle in a hot-water compress and covers this again with a casing of felt. It should be mentioned that the patient is always given a preliminary injection of morphia. In concluding the article, Dr. Dialti expresses the hope that his colleagues will make trial of ether by the drop method, as he is convinced that this is the safest and most satisfactory method of inducing anæsthesia.

Max Nordau and the International Eugenics Congress.

Professor Max Nordau has explained in an article in the *Tribune* his reasons for refusing the invitation to the International Eugenics Congress. Briefly, they are that the breed of man cannot be improved in the same way as that of other animals; that any attempt to do so is quite impracticable and, even if possible, not advisable, as such selection would result only in the production of a physically fine race and involve the loss to humanity of the types of genius to which the world owes more than to the physically perfect; and that such an attempt is not necessary as, though in his opinion "our civilisation leads to physiological degeneration" in the great centres of population, yet "the race constantly eliminates its waste products, as degeneration leads certainly to sterility." The article, which began with a depreciatory reference to Sir Francis Galton, unnecessary and in bad taste, has aroused the resentment of Italian eugenists who have not been slow to respond in the public press. They point out that eugenics makes no pretensions to remake humanity, but aims at studying the causes which tend to the degeneration of the human race or the reverse, at coördinating the forces opposed to decadence and degeneration, and as a practical contribution to the bettering of the living generation collaborating in the movements against syphilis and against alcohol. Against Max Nordau himself they contend that his criticisms are superficial and his arguments inconsistent with his previous writings.

Oct. 14th.

[1] Il Policlinico, Sez. Pratica, xix., 39.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Preventable Deaths in the United States.

IN an address before the Fourth National Conservation Conference of the United States on Oct. 2nd Professor Irving Fisher declared that out of some 1,600,000 deaths occurring annually in the United States 600,000 were preventable. He urged the establishment of an adequate system of collecting and distributing vital statistics similar to that in use in Sweden. In the United States, he said, public health had been regarded almost exclusively as a matter of protection against germs. While this was effective against plague and other epidemics of acute diseases, it was almost powerless to prevent the chronic diseases of middle and late life—Bright's disease, heart disease, nervous breakdown—due primarily to unhygienic personal habits. Most American communities preferred a high death-rate to a slight increase of the tax rate. There was not an adequately financed health department in the country, and many towns had no health department at all.

Professor Rubner on Cell Life.

Professor Rubner, of the University of Berlin, delivered the Wesley Carpenter lecture at the New York Academy of Medicine on Oct. 3rd, on his investigations into the nature of the life of the cell. He traced the evidence of independent life which he had analysed in the single cell, taking yeast as an example, and stated that in his opinion the early theories of Pasteur on the independent life-giving process of fermentation were nearer the truth than later ones, which ascribed the process to outside chemical factors. The materials contained in peptone, for example, were used simply to build up the mass of substance in the yeast, "even as bricks may be added to the already standing structure of a building." But the vibrations of life in the living substance of yeast, the lowest forms of life, were derived from the energy produced by the process of fermentation.

Small-pox in Pennsylvania.

Small-pox has long been prevalent to a greater or less extent in many parts of the United States. An outbreak at Pittsburg and Carbondale, Pennsylvania, has been investigated by the State Commissioner of Health, who attributes the epidemic to the failure in carrying out the State vaccination laws. Sixteen deaths had occurred up to Sept. 17th in unvaccinated children under 7 years of age. The source of infection in Pittsburg has not been traced, but the outbreak at Carbondale is believed to be due to a case which came from New York, and which was not isolated in consequence of having been diagnosed as chicken-pox.

Open-air Schools.

Upwards of 200 open-air schools and fresh-air classes are now in working order in various parts of the United States. The gospel of fresh air is spreading rapidly in the United States and in Canada. In Toronto especially the idea has taken firm root, and the open-air schools of that city are flourishing. The first school of this kind was established in Providence, R.I., in January, 1907. At the commencement of 1910 there were only 13 open-air schools in the United States, and in 1911 there were 29. In Massachusetts, the headquarters of the movement, there are 86 fresh-air schools and classes, 80 being in Boston. New York State has 29 and Ohio 21.

Horse Plague in Kansas.

Twenty thousand horses are said to have fallen victims to a disease that is termed spinal meningitis in Kansas and Nebraska. Twenty veterinary experts have been sent by the United States Department of Agriculture into the infected districts to investigate and fight the epidemic which prevails over two-thirds of Kansas.

Poliomyelitis in Buffalo.

The epidemic of poliomyelitis which commenced in Buffalo in June has not yet altogether subsided. In the week ending Sept. 14th 18 cases were reported, making a total number of cases reported up to that date of 226 with 30 deaths. A large number of cases have been reported also in the neighbourhood of Buffalo; in fact, that district and that part of Canada adjacent to Erie county appear to be liable

to outbreaks of the disease. It is only somewhat more than a year ago that an epidemic of infantile paralysis occurred in Hamilton, while many sporadic cases have occurred in Toronto and vicinity during the past few years.

Oct. 5th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

The Hospitals of the New Capital.

THE hospital arrangements in temporary Delhi have now, it is understood, been finally settled. The General Hospital for Europeans will be established in Hindu Rao House and the hospital for Indians in Balak Ram-ki-Kothi, while a small hospital for infectious cases will be built on the Durbar area somewhere near Kingsway. For the present these hospitals will be under the charge of Major W. H. Ogilvie, I.M.S., special medical officer at temporary Delhi.

A Women's Medical Service for India.

The last report of the Countess of Dufferin Fund, the pioneer of a women's medical service, discusses at some length this question, at present uppermost in the minds of medical women in India. The needs of the time have outgrown the possibilities of any voluntary organisation, and the growing demand for better trained and better qualified medical women can only be met by a service organised, financed, and controlled by Government. The report contains the draft scheme for the proposed Women's Indian Medical Service, submitted to the Secretary of State last November, and a note from Surgeon-General Sir C. P. Lukis on the estimated cost. The idea is to provide 50 lady doctors of the first grade, with 60 assistant surgeons, a service sufficient to staff 43 major and 51 minor hospitals and provide for a leave reserve. It is estimated that the cost would be about three lakhs more than the present available income of the Dufferin Fund, but there will probably be difficulty in providing even this modest sum. The local governments are not in a position to contribute; the central committee are at the end of their resources; and there is little prospect of increased subscriptions from the European or Indian public. It is suggested that the withdrawal of three lakhs a year from the projected lavish expenditure on education would hardly be missed, while the saving of life and the abatement of suffering might well outweigh the production of a few dozen more university graduates. On this subject the *Times of India* says that a scheme suited to the wants of Indian women is more likely to be devised through consultation with those in touch with the conditions of life in the villages than by an association, however influential, in London.

Hospitals in the United Provinces.

It appears from the report for 1911 on the civil hospitals and dispensaries of the United Provinces that the experiment inaugurated in 1910 to extend and popularise medical advice and treatment by sending out travelling dispensaries into villages and districts was successfully continued in 1911 on a much larger scale. In 1910 four travelling dispensaries treated 31,092 patients; in 1911 12 malaria dispensaries perambulated the country side, besides 32 other dispensaries, primarily intended to combat plague and encourage inoculation. Colonel C. C. Manifold, Inspector-General of Civil Hospitals, United Provinces, describes their success as "instantaneous and universal." During their six months' itinerary 301,266 persons were treated, of whom 49,267 were malaria cases, and 4,239 operations were performed. The result of this attempt to bring the hospital to the patient where the patient will not or cannot go to the hospital is held entirely to justify the continuance and expansion of the system. Colonel Manifold also extols the value of medical relief and operative work carried on by civil surgeons in villages and outlying parts of their districts, with which the Lieutenant-Governor of the United Provinces fully concurs.

The Sanitary Commissioner with the Government of India.

Under the new scheme just promulgated, which goes back to the proposals of 1904, the Sanitary Commissioner to the Government of India becomes subordinate, to a certain extent, to the Director-General, Indian Medical Service. He will, however, have independent authority in technical sanitary matters, with power, as at present, to correspond direct with the Government of India. He will be relieved of as much routine work as possible, the Statistical Office being given more responsible duties. The Sanitary Commissioner will thus be able to tour freely and regularly, a matter of great importance in view of the impetus recently given to sanitation all over India. The leading Indian newspapers agree with the official pronouncement that a wide sphere of useful work lies before the Imperial Sanitary Commissioner as an advisory authority. It is also hoped that his relations with local administrations will be such as to conduce to the smooth working of the new sanitary policy for India. The Government of India have given no less than 181½ lakhs—over a million sterling—in the past two years for sanitation, not to mention 15 lakhs—nearly £100,000—for research work, while a recurring yearly grant of 2½ lakhs (£15,000) has been made to assist local administrations in introducing the scheme for the reorganisation of the sanitary services, so that the Sanitary Commissioner for years to come should be one of the busiest officials in India.

King Edward Memorial at Mandalay.

The King Edward Memorial maternity wards at Mandalay were opened on August 14th by the Lieutenant-Governor, who congratulated the modest little Mandalay hospital on having gone a step ahead of her magnificent sister, the Rangoon General Hospital, by providing maternity wards.

Deaths from Wild Animals and Snakes.

Nearly 2000 persons were killed by wild animals, chiefly tigers, in British India during 1911. In 1910 the figure was 2382. The total mortality from snake-bite rose from 22,478 in 1910 to 24,264 in 1911, Bengal heading the list with 9344 deaths.

Sept. 18th.

Obituary.

JAMES GLENNY GIBB, M.D., M.S. DURH., F.R.C.S. ENG.

James Glenny Gibb, whose sudden death is reported from the Union Medical College, Peking, was born on August 4th, 1874. His father, the late James Gibb, was a member of Lloyds and sometime Member of Parliament for Harrow. For several years after leaving school Glenny Gibb worked in his father's office, and it was not until he was 25 or 26 that he gave up business for the study of medicine. He knew his powers and his limitations, and he decided that as a medical practitioner he could best serve his fellow men; accordingly, with characteristic zeal and industry, he set about to make himself master of his new work. In this he succeeded, and when he left for the Chinese mission field he was an accomplished all-round clinician and laboratory worker. He studied at Newcastle-on-Tyne and St. Bartholomew's Hospital, where he distinguished himself as a long-distance runner, and qualified M.R.C.S., L.R.C.P. in 1905, obtaining the M.B. and B.S. degrees at the University of Durham in the same year. He then held in succession the posts of house physician at Westminster Hospital and house surgeon and ophthalmic house surgeon at St. Bartholomew's, and in 1908 he obtained the Fellowship of the Royal College of Surgeons and the M.D. and M.S. degrees of his University. Thus qualified and equipped, it seemed strange to some that he should immediately join a little band of workers in a far country, but those who knew him knew that this step had long been decided upon. Gibb was not in the least suited by temperament for private practice, and he never intended to make that his life work. He had other ideals, which were known to his friends, but which he did not advertise. His religion was with him a very real thing, and it influenced all his thoughts and actions, although he never forced his views upon others. He was quite incapable of pretence or meanness, and while hard upon himself he tried not to judge others by his own lofty standards. Always careless of appearances and rugged in manner, and intensely occupied with the work in hand, he neither sought nor achieved popularity of the ordinary kind, but he commanded to a remarkable

extent the respect and confidence of all who knew him, and in a very special degree that of his seniors. At his work he showed great capacity and energy, and this, combined with ability of a high order, singled him out amongst his contemporaries as the man to ask advice of or to seek help from; and his advice or assistance was tendered with such thought and generosity of spirit as to make it doubly acceptable. His friendship was highly valued by all who possessed it, and his memory will long be honoured at home and in China.

Dr. Gibb married in 1908, and his wife, who had been a sister at St. Bartholomew's Hospital, accompanied him when he went to take up his post at the Union Medical College, Peking. Two years ago he offered his services for plague duty at Harbin, and he was sent by the Chinese Government to deal with the outbreak there. During last year's revolution he was in charge of the Red Cross organisation in Peking. The cause of his death is not yet known in England, but to add to his family's sorrow news came from Peking a week later or the death of his elder son.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Hermann Munk, the well-known Berlin physiologist, at the age of 73, after a long illness. Notwithstanding his great eminence, it is generally understood that when the chair became vacant in the University of Berlin by the death of Professor du Bois Reymond, the Prussian Ministry objected to promote Dr. Munk from the extraordinary professorship which he had held since 1869 merely on account of his Jewish religion. His early researches on the functions of the cerebral cortex were recognised as so important that he was elected a member of the Berlin Academy of Sciences when only 40 years of age—a very uncommon circumstance. In addition to his post in the university he also held the chair of physiology in the Veterinary School to which he was appointed in 1876.—Dr. O. Langner, of Berlin, sanitary councillor.—Dr. H. Koenig, of Crefeld, sanitary councillor.—Dr. H. Pulz, of Düsseldorf, sanitary councillor.—Dr. J. Bach, of Marburg, privy sanitary councillor and professor.—Professor J. Disse, of Marburg.—Dr. J. Zuckermann, of Crefeld, sanitary councillor.—Dr. E. Heuss, *privat-docent* of dermatology and syphiligraphy in the University of Zürich.—Dr. Joël W. Wright, formerly professor of surgery in the University of Vermont, Burlington.—Dr. N. Nahm, of Frankfort, the founder of the first of the German consumption establishments, that of Ruppertsheim in the Taunus. His age was only 47, and he held the position of sanitary councillor.—Dr. Peter Keimer, *docent* of laryngology in the Düsseldorf Academy of Practical Medicine.

UNSELFISH DEVOTION TO DUTY.—Dr. G. H. W. Robertson, J.P., has been awarded the medal of the Order of St. John of Jerusalem in England for his conduct in a railway accident in South Africa last year. The train by which he was a passenger ran over a steep embankment in the middle of the night at a spot many miles from assistance of any kind, and after extricating himself from the débris, Dr. Robertson, who had sustained very serious injuries, including four broken ribs, had himself carried round among the other unfortunate passengers, and rendered valuable service in directing the treatment of the most seriously injured till he collapsed through pain and exhaustion.

THE friends of the late Miss Rosa Morison (lady superintendent of women students at University College, London, 1883–1912) have formed a committee with the object of raising a memorial to her. The Right Hon. Lord Reay is the president, Dr. T. Gregory Foster, Ph.D. (Provost of University College), the chairman, Lady Lockyer the treasurer, and Miss E. Chick and Miss E. Goodyear the honorary secretaries. It is suggested that in the first instance portrait medallions or busts should be provided, one to be placed in University College and the other in College Hall; and, in the second instance, that a loan fund or a scholarship should be instituted for the benefit of students connected with University College. Sympathisers with these objects are asked to communicate with the honorary secretaries, Rosa Morison Memorial Committee, University College Gower-street, London, W.C.

THE SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

WE published in THE LANCET of Jan. 6th, 1912, a list of the officers of the forthcoming International Medical Congress, to be held in London, August 6th to 12th, 1913, under the patronage of His Majesty the King. H.R.H. Prince Arthur of Connaught has graciously consented to open the Congress on Wednesday, August 6th, at 11 A.M., in the Albert Hall.

The *personnel* of the officers of Congress has not altered since January of this year, but a few names have been added to the vice-presidents of the sections, and death also has removed a few others from the lists.

THE GENERAL SESSIONS.

The arrangements for the general sessions are as follows:—A general session will be held in the Albert Hall on each day, except Saturday, during the Congress at 5.30 P.M., at which the following general addresses will be delivered:—

Wednesday, August 6th.—Address in Medicine, Professor Chauffard, of Paris.

Friday, August 8th.—Address in Pathology, Geheimrat Professor Paul Ehrlich, of Frankfort.

Tuesday, August 12th.—Address on Public Health, Right Hon. John Burns, M.P., President, Local Government Board. Address in Surgery, Professor Harvey Cushing, of Harvard University. Address on Heredity, W. Bateson, F.R.S.

SECTIONS.

The following is the programme of discussions in the sections with the names of the reporters, so far as they are settled, arranged in alphabetical order. We take the opportunity of congratulating the honorary general secretary of the Congress, Dr. W. P. Herringham, and the officials of the Sections, on the promptitude with which this programme has been issued:—

Section I.—Anatomy and Embryology.

Thursday, August 7th.—1. The Excitatory and Connecting Muscular System of the Heart. (Jointly with Section III.) *Reporters:* Professor Dr. Wilhelm His, Berlin; Dr. Josué, Paris; Dr. Thomas Lewis, London; Dr. Ivy Mackenzie, Glasgow.

Friday, August 8th.—2. The Early Stages of the Human Ovum. *Reporter:* Professor Aug. C. F. d'Eternod, Geneva.

Saturday, August 9th.—3. The Morphology of the Sympathetic System. *Reporter:* Professor G. Carl Huber, Ann Arbor, U.S.A.

Monday, August 11th.—4. The Morphology of the Shoulder Girdle. *Reporter:* Professor Raoul Anthony, Paris.

Tuesday, August 12th.—5. Cerebral Localisation and the Significance of Sulci. *Reporter:* Dr. C. U. Ariens-Kappers, Amsterdam.

Section II.—Physiology.

Friday, August 8th.—1. Correlation of Organs of Internal Secretions and their Disturbances. (Jointly with Section VI.) *Reporters:* Professor E. Gley, Paris; Professor Dr. Baron Alex. v. Korányi, Budapest; Professor Dr. Fredk. Kraus, Berlin. 2. Reciprocal Innervation. *Reporter:* Professor C. S. Sherrington, Liverpool.

Tuesday, August 12th.—3. Endogenous Metabolism of Proteins. (Jointly with Section III. (a).) *Reporters:* Professor Dr. Emil Abderhalden, Halle a/S.; Dr. H. Dakin, Seal Harbour, U.S.A.

Section III.—General Pathology and Pathological Anatomy.

Thursday, August 7th.—1. The Excitatory and Connecting Muscular System of the Heart. (Jointly with Section I.) *Reporters:* Professor Dr. Wilhelm His, Berlin; Dr. Josué, Paris; Dr. Thomas Lewis, London; Dr. Ivy Mackenzie, Glasgow.

Friday, August 8th.—2. The Pathology of Fats and Lipoids. *Reporters:* Professor Dr. Ivor Christian Bang, Lund; Dr. Sigmund Fränkel, Vienna.

Saturday, August 9th.—3. Grafting of Normal Tissues as Dependent upon Zoological or Individual Affinity: Autoplastic, Isoplastic, Heteroplastic. *Reporters:* Professor Dr. Max Borst, Munich.

Monday, August 11th.—4. The Pathology of Shock. *Reporters:* Dr. G. W. Crile, Cleveland, U.S.A.; Professor Yandell Henderson, New Haven, U.S.A.

Tuesday, August 12th.—5. The Effect of Radio-active Substances and Radiations upon Normal and Pathological Tissues. *Reporters:* GMR. Professor Dr. Oscar Hertwig, Grünwald, b/Berlin; Dr. W. S. Lazarus-Barlow, London.

Subsection III. (a).—Chemical Pathology.

Thursday, August 7.—1. Pathological Conditions due to Defects in Diet. *Reporters:* Dr. F. Gowland Hopkins, F.R.S., Cambridge; Dr. H. Schaumann, Hamburg.

Friday, August 8th.—2. Cancer. (Jointly with Section IV.) *Reporters:* Dr. E. Freund, Vienna; Professor Dr. C. Neuberg, Berlin-Charlottenburg.

Saturday, August 9th.—3. Clinical Applications of Pathological Chemistry. *Reporters:* Professor Otto Folin, Boston, U.S.A.; Dr. A. E. Garrod, London.

Monday, August 11th.—4. The Chemical Pathology of the Alimentary Tract.

Tuesday, August 12th.—5. Endogenous Metabolism of Proteins. (Jointly with Section II.) *Reporters:* Dr. E. Abderhalden, Halle, a/S.; Dr. H. Dakin, Seal Harbour, U.S.A.

Section IV.—Bacteriology and Immunity.

Theories of Immunity and Anaphylaxis. *Reporter:* Professor Dr. E. Friedberger, Berlin. Nature of Virulence. Filter Passers. Leprosy and Allied Bacilli.

Friday, August 8th.—Cancer. (Jointly with Section III. (a).) *Reporters:* Dr. E. Freund, Vienna; Professor Dr. C. Neuberg, Berlin-Charlottenburg.

Section V.—Therapeutics (Pharmacology, Physiotherapy, Balneology).

Thursday, August 7th.—1. The Comparative Value of Cardiac Remedies. *Reporters:* GMR. Professor Dr. R. Gottlieb, Heidelberg; Professor Theodore C. Janeway, New York, U.S.A.

Friday, August 8th.—2. The Action and Use of Remedies for Pain and Sleeplessness (excluding Anæsthetics, Local and General). *Reporter:* Professor Dr. Hans Meyer, Vienna.

Saturday, August 9th.—3. A Laboratory Meeting.

Monday, August 11th.—4. Non-Bacterial Toxins and Antitoxins.

Tuesday, August 12th.—5. Thermal Treatment: its Indications, Limitations, and Risks. *Reporter:* Professor Landouzy, Paris.

Section VI.—Medicine.

Thursday, August 7th.—1. The Pathology of Heart Failure. *Reporters:* Professor H. Vaquez, Paris; Professor Dr. K. F. v. Wenckebach, Strassburg.

Friday, August 8th.—2. Correlation of Organs of Internal Secretions and their Disturbances. (Jointly with Section II.) *Reporters:* Professor E. Gley, Paris; Professor Dr. Baron Alex. v. Korányi, Budapest; Professor Dr. Fredk. Kraus, Berlin.

Saturday, August 9th.—3. The Clinical Aspects of Hæmolysis. *Reporters:* Professor G. Banti, Florence; Professor F. Widal, Paris.

Monday, August 11th.—4. Diabetes. *Reporters:* Professor Geo. Dock, St. Louis, U.S.A.; Professor Dr. Karl van Noorden, Vienna.

Tuesday, August 12th.—5. Differentiation of the Diseases included under Chronic Arthritis. *Reporters:* Professor L. F. Barker, Baltimore, U.S.A.; Professor Dr. Friedr. v. Müller, Munich.

Section VII.—Surgery.

Thursday, August 7th.—1. The Operative Treatment of Malignant Disease of the Large Intestine (excluding the Rectum). *Reporters:* Professor Raffaele Bastianelli, Rome; GSR. Professor Dr. W. Körte, Berlin.

Friday, August 8th.—2. Diagnosis and Treatment of Early Renal and Vesical Tuberculosis. (Jointly with Section XIV.) *Reporters:* Dr. Félix Legueu, Paris; Professor Victor Rochet, Lyons; Dr. Hans Wildbolz, Berne.

Saturday, August 9th.—3. The Surgery of the Arterial System. *Reporters:* Professor Rudolph Matas, New Orleans, U.S.A.; Professor Dr. V. A. Oppel, St. Petersburg.

Monday, August 11th.—4. The Treatment of Tumours of the Brain and the Indications for Operation. (Jointly with Section XI.) *Reporters:* Professor Dr. Bruns, Hanover; Professor Harvey Cushing, Harvard University, U.S.A.; Professor Dr. Freih. v. Eiselsberg, Vienna; Dr. H. H. Tooth, London.

Tuesday, August 12th.—5. Intra-thoracic Surgery. *Reporters:* Professor Dr. F. Sauerbruch, Zürich; Professor Théodore Zuffer, Paris.

Subsection VII. (a).—Orthopædics.

Thursday, August 7th.—1. Spastic Paraplegia. *Reporters:* GMR. Professor Dr. H. Küttner, Breslau; E. Muirhead Little, F.R.C.S., London; Professor Dr. Vulpius, Heidelberg.

Friday, August 8th.—2. The Treatment of Scoliosis. *Reporters:* Dr. R. W. Lovett, Boston, U.S.A.; Professor Dr. A. Schanz, Dresden.

Saturday, August 9th.—3. The Treatment of Ankylosis. *Reporters:* Dr. W. S. Baer, Baltimore, U.S.A.; Professor V. Putti, Bologna.

Monday, August 11th.—4. The Treatment of Tuberculous Joints in Childhood. *Reporters:* Professor Dr. Julius Dollinger, Budapest; Professor John Ridlon, Chicago, U.S.A.

Tuesday, August 12th.—5. Radiography of Bones and Joints, and its Value in Orthopædic Surgery. (Jointly with Section XXII.) *Reporters:* Dr. Fedor Haenisch, Hamburg; Dr. Nové-Josserand, Lyons; Dr. P. Redard, Paris.

Subsection VII. (b).—Anæsthesia, General and Local.

1. (a) Recent Methods for Producing Analgesia: (i) Spinal, (ii) Local and Regional; (b) Contrast the Immediate and After-effects, especially Shock—e.g., Spinal and Local Analgesia with Inhalational Anæsthesia, with Special Reference to Psychic Shock. *Reporter:* Professor Yandell Henderson, New Haven, U.S.A.

2. Recent Methods of General Anæsthesia: (a) Ether: (i) Open Method; (ii) Intravenous Method. *Reporter:* Professor Dr. L. Burkhardt, Nurnberg. (iii) Intratracheal Method. *Reporter:* Professor S. J. Meltzer, New York, U.S.A. (iv) Nasal Method. *Reporter:* Dr. G. W. Crile, Cleveland, U.S.A. (v) Rectal Method; (b) The Use of Alkaloids Alone or Before Inhalational Anæsthesia, Scopolamine and Scopomorphine; (c) Inhalational Anæsthesia in Association with Alkaloidal Bodies: (i) Nitrous Oxide in Major Surgery; (ii) Ether; (iii) Choloroform. *Reporter:* Dr. G. W. Crile, Cleveland, U.S.A.

3. Dosimetric Method of Administering: (i.) Chloroform; (ii.) Ether (a) Regulators; (b) Mixtures.

4. Post-operative Effects and Toxæmias associated with Anæsthetics.

5. The Selection of Appropriate Anæsthetic Agent and Mode of Administration in Constitutional Dyscrasiæ which Render the Exhibition of Certain Anæsthetics Inadvisable. *Reporter:* Professor Dr. Fritz Dumont, Berne.

6. The Management of Special Types of Patients and Operations. *Reporter:* Dr. Dudley Buxton, London.

Section VIII.—Obstetrics and Gynæcology.

Thursday, August 7th.—1. The Treatment of Hæmorrhage from the Placental Site (Placenta Prævia and Accidental Hæmorrhage) in the Later Months of Pregnancy. *Reporters:* GMR. Professor Dr. Döderlein, Munich; Professor Dr. G. Essen-Möller, Lund.

Friday, August 8th.—2. Infant Mortality in the First Four Weeks of Life. (Jointly with Sections X. and XVIII.) *Reporters:* Dr. A. K. Chalmers, Glasgow; Dr. Henry Koplik, New York City, U.S.A.; Professor Pinard, Paris.

Monday, August 11th.—3. Roentgen and Radium Therapy in Gynæcology. (Jointly with Section XXII.) *Reporters:* Dr. Foveau de Courmelles, Paris; Professor Dr. Bernh. Krönig, Freiburg i/Br.; Professor Dr. Albers Schönberg, Hamburg.

Tuesday, August 12th.—4. Cancer of the Uterus (Body and Cervix): Operative Technique and Results. *Reporters:* Professor Dr. D. de Ott, St. Petersburg; Professor A. Pollosson, Lyons; Professor Dr. Wertheim, Vienna.

Section IX.—Ophthalmology.

Thursday, August 7th.—1. The Pathogenesis of Chronic Uveitis, excluding the Syphilitic, Tuberculous, and Sympathetic Varieties. *Reporters:* Professor Dr. Ernst Fuchs, Vienna; Professor de Schweinitz, Philadelphia, U.S.A.

Friday, August 8th.—2. Glaucoma Operations, with Special Reference to the Comparative Results Attained by Iridectomy and its Recent Substitutes. *Reporters:* Professor Lagrange, Bordeaux; Professor Priestley Smith, Birmingham.

Saturday, August 9th.—3. "Demonstration" Meeting or a Discussion upon a subject not yet determined.

Monday, August 11th.—4. Affections of the Eye Produced by Undue Exposure to Light. *Reporters:* Professor Carl v. Hess, Würzburg; John H. Parsons, F.R.C.S., London.

Tuesday, August 12th.—5. Anaphylaxis in its Relation to Ophthalmology. *Reporters:* Dr. V. Morax, Paris; Dr. Aurel v. Szily, Freiburg i/Br.

Section X.—Diseases of Children.

Thursday, August 7th.—1. Treatment of Tuberculosis in Childhood from the Surgical Point of View, with Special Reference to the Bones, Joints, and Glands. *Reporter:* Dr. Ménard, Berck-sur-Mer.

Friday, August 8th.—2. Infant Mortality in the First Four Weeks of Life. (Jointly with Sections VIII. and XVIII.). *Reporters:* Dr. A. K. Chalmers, Glasgow; Dr. Henry Koplik, New York City, U.S.A.; Professor Pinard, Paris.

Saturday, August 9th.—3. Effects of the Ductless Glands on Development. *Reporters:* Professor Dr. Rudolf Fischl, Prague; Professor Hutinel, Paris.

Monday, August 11th.—4. Infection of the Urinary Tract with Colon Bacilli. *Reporters:* Dr. John Thomson, Edinburgh; Professor Francesco Valagussa, Rome.

Tuesday, August 12th.—5. Polioencephalitis and Poliomyelitis. *Reporters:* Professor Flexner, New York, U.S.A.; Professor Dr. Paul H. Römer, Marburg.

Section XI.—Neuropathology.

Thursday, August 7th.—1. The Symptoms of Cerebellar Disease and their Significance. *Reporters:* Dr. J. Babinski, Paris; Professor Dr. D. Rothmann, Berlin.

Friday, August 8th.—2. Motor Aphasia, Anarthria, and Apraxia. *Reporters:* Professor Dejerine, Paris; Professor Dr. Liepmann, Berlin.

Saturday, August 9th.—3. The Relation of the Myopathies. *Reporters:* Professor Dr. D. H. Oppenheim, Berlin; Professor Spiller, Philadelphia, U.S.A.

Monday, August 11th.—4. The Treatment of Tumours of the Brain and the indications for Operation. (Jointly with Section VII.) *Reporters:* Professor Dr. Bruns, Hanover; Professor Harvey Cushing, Harvard University, U.S.A.; Professor Dr. Freih. v. Eiselsberg, Vienna; Dr. H. H. Tooth, London.

Tuesday, August 12th.—5. The Nature of the Condition termed Parasyphilis. *Reporters:* Dr. F. W. Mott, London; Professor Dr. Nonne, Hamburg.

Section XII.—Psychiatry.

Thursday, August 7th.—1. The Psychiatric Clinique, its Aims (Educational and Therapeutic) and the Results obtained in Respect to Promotion of Recovery. *Reporters:* Dr. Adolf Meyer, Baltimore, U.S.A.; Professor Dr. Sommer, Giessen.

Friday, August 8th.—2. Psycho-Analysis. *Reporters:* Professor P. Janet, Paris; Dr. Karl Jung, Küsnach—Zürich.

Saturday, August 9th.—3. The Psychoses of Infection and Autointoxication. *Reporter:* GMR. Professor Dr. K. Bonhöffer, Breslau.

Monday, August 11th.—4. The Syphilitic and the Parasyphilitic Insanities. *Reporters:* Professor W. v. Bechterev, St. Petersburg; Dr. A. Marie, Villejuif.

Tuesday, August 12th.—5. The Psychology of Crime. (Jointly with Section XIX.) *Reporters:* GMR. Professor Dr. A. Cramer, Göttingen; Professor Comm. E. Morselli, Genoa.

Section XIII.—Dermatology and Syphilography.

Thursday, August 7th.—1. Epithelioma of the Skin, Benign and Malignant. *Reporters:* Dr. J. A. Fordyce, New York, U.S.A.; Professor Dr. J. Jadassohn, Berne. A paper will also be read by Dr Jean Darier, Paris.

Friday, August 8th.—2. Alopecia Areata and Allied Conditions. *Reporters:* Dr. R. Sabouraud, Paris; Dr. P. G. Unna, Emsbüttel—Hamburg.

Saturday, August 9th.—3. Syphilis: its Dangers to the Community, and the question of State Control. (Jointly with Section XIX.) *Reporters:* Professor Dr. Ernst Finger, Vienna; Professor Dr. Edmund Lesser, Berlin.

Monday, August 11th.—4. The Treatment of Syphilis by Salvarsan and Allied Substances. (Jointly with Section XX.) *Reporters:* Professor Dr. Paul Ehrlich, Frankfort; Major T. W. Gibbard, R.A.M.C., conjointly with Major L. W. Harrison, R.A.M.C.; Professor L. A. Neisser, Breslau; Professor Vennin, Paris.

Tuesday, August 12th.—5. The Vaccine Treatment of Diseases of the Skin. *Reporters:* Professor T. C. Gilchrist, Baltimore, U.S.A.; Professor Arthur Whitfield, London.

Section XIV.—Urology.

Thursday, August 7th.—1. Diagnosis and Treatment of Early Malignant Disease of the Prostate. *Reporters:* Professor Dr. H. Kümmel, Hamburg; Dr. Hugh Young, Baltimore, U.S.A.

Friday, August 8th.—2. Diagnosis and Treatment of Early Renal and Vesical Tuberculosis. (Jointly with Section VII.) *Reporters:* Dr. Félix Legueu, Paris; Professor Victor Rochet, Lyons; Dr. Hans Wildbolz, Berne.

Saturday, August 9th.—3. Diagnosis and Treatment of Hæmic Infections of the Urinary Tract. *Reporters:* Dr. George Emerson Brewer, New York City, U.S.A.; Professor Dr. Thorkild Rovsing, Copenhagen.

Monday, August 11th.—4. Projectoscope Demonstration.

Tuesday, August 12th.—5. Exhibition of Pathological Specimens and New Instruments.

Section XV.—Rhinology and Laryngology.

Thursday, August 7th.—1. On the Recent Progress of Endoscopic Methods as Applied to the Larynx, Trachea, Bronchi, Œsophagus, and Stomach. *Reporters:* Professor Chevalier Jackson, Pittsburg, U.S.A.; Professor Dr. G. Killian, Berlin.

Friday, August 8th.—2. Conjoint Meeting with Section XVI. (The President of the Section of Laryngology to preside.) The Methods and Results of Treatment of Diseases of the Throat, Nose, and Ear by Salvarsan and other Arsenical Compounds. *Reporters:* Dr. André Castex, Paris; Professor Dr. P. Gerber, Königsberg i/Pr.

Saturday, August 9th.—3. Indications for, and Relative Values of, Tonsillotomy and Tonsillectomy. *Reporters:* Professor Dr. H. Burger, Amsterdam; Dr. J. L. Goodale, Boston, U.S.A.

Monday, August 11th.—4. Conjoint Meeting with Section XVI. (The President of the Section of Otology to preside.) The Special Treatment of the Throat, Nose, and Ear during the Active Stages of certain Infectious Fevers—namely, Scarlet Fever, Measles, German Measles, Mumps, Influenza, Typhoid, Whooping-cough, Small-pox, Chicken-pox, Erysipelas, Anterior Poliomyelitis, and Cerebro-spinal Meningitis (Diphtheria excluded). *Reporters:* Dr. Victor Delsaux, Brussels; Dr. E. W. Goodall, London.

Tuesday, August 12th.—5. The Pathology and Treatment of Malignant Growths of the Nose and Naso-pharynx (Fibroma to be excluded). *Reporters:* Professor Cav. G. Ferreri, Rome; Dr. H. Marschik, Vienna.

Section XVI.—Otology.

Thursday, August 7th.—1. Pathology of Deaf-Mutism. *Reporters:* Professor Dr. Alfred Denker, Halle a/S.; Professor Dr. Holger Mygind, Copenhagen.

Friday, August 8th.—2. Conjoint Meeting with Section XV. (The President of the Section of Laryngology to preside.) The Methods and Results of Treatment of Diseases of the Throat, Nose, and Ear by Salvarsan and other Arsenical Compounds. *Reporters:* Dr. André Castex, Paris; Professor Dr. P. Gerber, Königsberg i/Pr.

Saturday, August 9th.—3. Non-suppurative Diseases of the Labyrinth. *Reporters:* Professor Dr. Gustav Alexander, Vienna; Professor Dr. Karl v. Eicken, Giessen.

Monday, August 11th.—4. Conjoint Meeting with Section XV. (The President of the Section of Otology to preside.) The Special Treatment of the Throat, Nose, and Ear during the Active Stages of certain Infectious Fevers—namely, Scarlet Fever, Measles, German Measles, Mumps, Influenza, Typhoid, Whooping-cough, Small-pox, Chicken-pox, Erysipelas, Anterior Poliomyelitis, and Cerebro-spinal Meningitis (Diphtheria excluded). *Reporters:* Dr. Victor Delsaux, Brussels; Dr. E. W. Goodall, London.

Tuesday, August 12th.—5. Climatic and Occupational Influences in Diseases of the Ear. *Reporters:* Dr. Clarence J. Blake, Boston, U.S.A.; Professor Giuseppe Gradenigo, Turin.

Section XVII.—Stomatology.

Thursday, August 7th.—1. The Pathology and Treatment of Periodontal Disease. (Pyorrhœa Alveolaris.) *Reporters:* E. B. Dowsett, M.R.C.S., L.D.S., London; Dr. N. N. Znamensky, Moscow.

Friday, August 8th.—2. The Relation of Nasal Obstruction to Dental Disease. *Reporters:* Dr. Jules Ferrier, Paris; J. G. Turner, F.R.C.S., L.D.S., London.

Saturday, August 9th.—3. Dental Diseases in Relation to Public Health. *Reporters:* Dr. J. Sim Wallace, London; Dr. Harold Williams, Boston, U.S.A.

Monday, August 11th.—4. The Supervision of the Health of Children between Infancy and School Age. (Jointly with Section XVIII.) *Reporters:* W. W. James, F.R.C.S., L.D.S., London; Dr. W. Leslie Mackenzie, F.R.S.Ed., Edinburgh.

Tuesday, August 12th.—5. Reflex and Functional Disturbances in Connexion with the Teeth. *Reporters:* Dr. A. W. W. Baker, Dublin; Dr. Rousseau-Decelle, Paris.

Section XVIII.—Hygiene and Preventive Medicine.

Thursday, August 7th.—1. The Effects of Dust in producing Diseases of the Lungs. *Reporter:* Dr. E. L. Collis, London.

Friday, August 8th.—2. Infant Mortality in the First Four Weeks of Life. (Jointly with Sections VIII. and X.) *Reporters:* Dr. A. K. Chalmers, Glasgow.; Dr. Henry Koplik, New York City, U.S.A.; Professor Pinard, Paris.

Saturday, August 9th.—3. The Factors that Determine the Rise, Spread, and Degree of Severity of Epidemic Diseases. *Reporters:* Dr. Major Greenwood, London; Professor Dr. G. Sticker, Bonn a/Rh.

Monday, August 11th.—4. The Supervision of the Health of Children between Infancy and School Age. (Jointly with Section XVII.) *Reporters:* W. W. James, F.R.C.S., L.D.S., London; Dr. W. Leslie Mackenzie, F.R.S. Ed., Edinburgh.

Tuesday, August 12th.—5. The Causes, Prevention, and Treatment of Visual Defects in School Children. *Reporters:* Dr. James Kerr, London; Professor Dr. R. Posseck, Graz.

Section XIX.—Forensic Medicine.

1. The Cause and Prevention of Suicide.

. The Teaching of Forensic Medicine, including the Construction and Equipment of a Medico-legal Institute. *Reporters:* Professor Dr. H. Zangger, Zürich; Professor L. Thoinot, Paris.

Saturday, August 9th.—3. Syphilis: its Dangers to the Community, and the Question of State Control. (Jointly with Section XIII.). *Reporters:* Professor Dr. Ernst Finger, Vienna; Professor Dr. Edmund Lesser, Berlin.

Tuesday, August 12th.—4. The Psychology of Crime. (Jointly with Section XII.) *Reporters:* GMR. Professor Dr. A. Cramer, Göttingen; Professor Comm. E. Morselli, Genoa.

Section XX.—Naval and Military Medicine.

Wednesday, August 6th (3 P.M.).—1. Transport of Wounded in Hill Warfare. *Reporters:* Major Jay Gould, I.M.S., with Captain C. W. Melville, I.M.S.

Thursday, August 7th.—2. Hospital Ships and Transport of Wounded. *Reporter:* Surgeon-General C. F. Stokes, U.S.A.

Thursday, August 7th.—3. Water-supplies in the Field. *Reporters:* Captain-Surgeon Dr. Zoltán de Ajkay, Hungary; Lieutenant-Colonel E. Jennings, I.M.S.

Friday, August 8th.—4. Antityphoid Inoculation. *Reporters:* Lieutenant-Colonel Sir William Leishman, R.A.M.C.; Major Fredk. F. Russell, U.S.A.

Saturday, August 9th.—5. Sanitary Organisation in the Tropics. (Jointly with Section XXI.) *Reporters:* Colonel W. C. Gorgas, U.S.A.; Colonel P. Hehir, I.M.S.; Stabsarzt Dr. Hintze, Berlin; Professor Sir Ronald Ross, Liverpool.

Monday, August 11th.—6. The Treatment of Syphilis by Salvarsan and Allied Substances. (Jointly with Section XIII.) *Reporters:* Professor Dr. Paul Ehrlich, Frankfort; Major T. W. Gibbard, R.A.M.C., conjointly with Major L. W. Harrison, R.A.M.C.; Professor Dr. L. A. Neisser, Breslau; Professor Vennin, Paris.

Tuesday, August 12th.—7. Caisson Disease. *Reporters:* Professor P. R. Moulinier, Bordeaux; Staff-Surgeon R. W. G. Stewart, R.N.

Tuesday, August 12th.—8. The Physiology of Physical Training and Marching. *Reporters:* Marine Stabsarzt Dr. Buchinger, Wilhelmshaven; Lieutenant-Colonel C. H. Melville, R.A.M.C.

Section XXI.—Tropical Medicine.

Thursday, August 7th.—1. Plague. *Reporters:* Professor Dr. S. Kitasato, Tokio; Major W. G. Liston, I.M.S.

Friday, August 8th.—2. Beri-beri. *Reporters:* Professor Dr. C. Eijkman, Utrecht; Professor Dr. B. Nocht, Hamburg.

Saturday, August 9th.—3. Sanitary Organisation in the Tropics. (Jointly with Section XX.) *Reporters:* Colonel W. C. Gorgan, U.S. Army; Colonel P. Hehir, I.M.S.; Stabsarzt Dr. Hintze, Berlin; Professor Sir Ronald Ross, Liverpool.

Monday, August 11th.—4. Leishmaniasis. *Reporters:* Professor A. Laveran, Paris; Dr. C. Nicolle, Tunis.

Tuesday, August 12th.—5. Relapsing Fevers. *Reporters:* Dr. C. Levaditi, Paris; Professor F. G. Novy, Ann Arbor, U.S.A.

Section XXII.—Radiology.

1. The Radiotherapy of Malignant Disease. *Reporters:* Dr. Robert Rienböch, Wien; Dr. Robert Abbé, New York.

2. The Radiography of the Stomach and Intestines. *Reporters:* Dr. G. Holzknecht, Wien; Dr. C. L. Leonard, Philadelphia.

Friday, August 8th.—3. The Radiography of the Chest. *Reporters:* Dr. Hugh Walsham, London; Professor Dr. K. F. v. Wenckebach, Strassburg.

Monday, August 11th.—4. Roentgen and Radium Therapy in Gynæcology. (Jointly with Section VIII.) *Reporters:* Dr. Foveau de Courmelles, Paris; Professor Dr. Bernh. Krönig, Freiburg i/Br.; Professor Dr. Albers Schönberg, Hamburg.

Tuesday, August 12th.—5. The Radiography of Bones and Joints and its Value in Orthopædic Surgery. (Jointly with Section VII. (a).) *Reporters:* Dr. Fedor Hænisch, Hamburg; Dr. Nové-Josserand, Lyons; Dr. P. Redard, Paris.

Section XXIII.—History of Medicine.

The sessions of the section will be devoted exclusively to the reading and discussion of papers chosen by individual members. Owing to the late formation of the section the programme of papers is not yet complete.

RULES OF THE CONGRESS.

The rules of the Congress remain substantially the same as those which have already appeared in THE LANCET; the only differences are that Article 14, which dealt with purely sectional business, has been transferred to the rules of the Sections, while Article 18 has been subdivided.

RULES OF THE SECTIONS.

The rules of the sections have been revised. The first six articles remain as published previously in our columns, as do the last eight, but the text of the following articles has been modified, and we publish them in their present form, as they are of great importance:—

Art 7.—*Reports.* In each section the morning session will be reserved for the discussion of important questions which have been previously selected by the council of the section. Each discussion will be introduced by one or two reporters chosen by the council of the section, with due regard to the international character of the Congress. The manuscripts of the reports must be typewritten, and must be sent to the Central Office of the Congress by Feb. 28th, 1913, at the latest. The reports of each section *which have arrived by the date fixed* will be printed and distributed as soon as possible, and before the opening of the Congress, to all members of the section who have then been enrolled. Those that arrive later cannot be so distributed. The reports will not be read *in extenso* at the session. Each reporter will, however, be allowed a maximum of 15 minutes for an opening *résumé*, and 10 minutes for a reply at the end of the discussion. Other speakers taking part in the discussion will be allowed a maximum of 10 minutes only for their remarks.

Art. 8.—Members of Congress who desire to take part in the discussion of any report may enter their names before the Congress by giving written notice to the general secretary. During the session they must communicate directly with the secretary of the section.

Art. 9.—Speakers will be called upon by the President according to the order of their inscription on the agenda.

Art. 10.—*Independent Papers.* The afternoon sessions will be devoted to the reading and discussion of independent papers. The titles of such papers should be announced to the Central Office of the Congress by April 30th, 1913. The council of the section has the right of selection from among the papers offered, and of declining any that they do not consider desirable. The council of the section will arrange the order in which the selected papers shall be read. Any papers offered after April 30th, 1913, will only be placed upon the agenda after the discussion of those which have been announced before this date and have been chosen by the council of the section. No paper will be accepted unless the title has been received by the secretaries of the section before July 1st, 1913. The text of every communication must be typewritten. A maximum of 15 minutes will be allowed for the reading of a paper, and five minutes for each speaker who takes part in the discussion. The author of the paper will be allowed five minutes for a reply.

Art. 11.—*Language.* Reports and independent papers may be written in English, French, German, or Italian. Speakers may avail themselves of other languages, but only if one of the members present translates into one of the above four languages the sense of the speech.

APPLICATIONS FOR MEMBERSHIP.

All applications for membership should be made to the general secretary, at the offices of the Congress, 13, Hinde-street, London, W. Subscriptions: £1; 5 dollars; 15 rupees. Ladies half price.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the quarterly examination in Practical Pharmacy held on Oct. 10th the following gentlemen were approved:—

Gordon Arnfield, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Gilbert Bailey, Manchester University; Auguste René Bourgault-Ducondray, University College and London Hospital; Ennis Ratcliff Chambers, London Hospital and private study; William Hunter Watson Cheyne, B.A. Cantab., Cambridge University and King's College Hospital; Frank Collar, Guy's Hospital; Harry Edmund Creswell, B.A. Cantab., Cambridge University and University College Hospital; Richard Shirley Fawssett, St. Bartholomew's Hospital; Alma Percy Ford, London Hospital; Maurice Rolfe Vickers Ford, Sheffield University; John Lewis Anderton Grout, Birmingham University; Melville St.Clair Hamilton, St. Thomas's Hospital; Frank Cecil Harrison, Sheffield University; Joseph Adrian Hart, London Hospital; Wilhelm Otto Holst, Middlesex Hospital; Edwin Lancelot Hopkins, London Hospital; Thomas Herbert Williams Idris, University College Hospital; John Wallace Kemp, Guy's Hospital; Guyon Lynden-Bell, King's College and St. George's Hospitals; Charles Virgil Nunez Lyne, King's College Hospital; William Marriott, St. Thomas's Hospital; Richard Moser, St. Bartholomew's Hospital; Henry Felix Mullan, London Hospital; Arthur Edward Panter, B.A. Cantab., Cambridge University and King's College Hospital; John Abraham Perera, Ceylon and University College Hospital; Alfred Cleveland Pickett, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Lindsay Clive Smith, London Hospital; and Maurice Lawrence Treston, London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Council of the Royal College of Surgeons on Oct. 10th the under-mentioned diplomas were conferred upon the following gentlemen, who have now complied with the by-laws:—

Diploma of Fellow.—Arthur Leyland Robinson, M.B., B.S. Lond., L.R.C.P., M.R.C.S., Liverpool and University College Hospital.

Diploma of Member.—Narayan Krishna Bal, L.M. & S. Bombay, Bombay University and Middlesex Hospital; Crawford Clelland Marshall, M.B., B.S. Melbourne, Melbourne University and Middlesex Hospital; Jivraj Narayan Mehta, L.M. & S. Bombay, Bombay University and London Hospital; John Godfrey Saner, B.A. Cantab., M.B., B.C. Cantab., Cambridge University and Guy's Hospital; William Clair Toll, M.B. Toronto, Toronto University and Middlesex Hospital; John Forbes Ward, M.B., Ch.B. Manchester, Manchester University; and George Jamieson Whetham, M.B. Toronto, Toronto University and Middlesex Hospital.

Licence in Dental Surgery.—Oswald Gelling Aylen, Birmingham University; Gilbert John Stuart Rose, Middlesex and National Dental Hospitals; George Lotan Venning, Middlesex and National Dental Hospitals.

SOCIETY OF APOTHECARIES OF LONDON.—At the Primary Examination (Parts I. and II.) held recently the following candidates passed in the subjects indicated:—

Chemistry.—H. C. C. Hackney, King's College.

Anatomy.—A. U. L. Bennet, Royal Free Hospital; C. H. Fischel, Middlesex Hospital; H. C. C. Hackney, King's College; N. Hoffmeister, Middlesex Hospital; J. Lyon, London Hospital; R. H. Pettersson, St. George's Hospital; J. E. Pickering, Edinburgh and St. Mary's Hospital; W. F. W. Sim, Otago and Edinburgh; and R. A. Wilson, Edinburgh.

Physiology.—C. H. Fischel and N. Hoffmeister, Middlesex Hospital; S. B. King, St. Mary's Hospital; J. Lyon, London Hospital; R. H. Pettersson, St. George's Hospital; J. E. Pickering, Edinburgh and St. Mary's Hospital; W. F. W. Sim, Otago and Edinburgh; and R. A. Wilson, Edinburgh.

UNIVERSITY OF BRISTOL.—The following degrees have been granted:—

M.D.—C. W. J. Brasher and V. B. Green-Armytage.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. George Axhausen, *privat-docent* of Surgery, has been granted the title of Professor.—*Bologna:* Dr. F. Fabris and Dr. E. Jarozzi have been recognised as *privat-docenten* of Operative Medicine.—*Genoa:* Dr. L. Macaggi, of Padua, has been recognised as *privat-docent* of Operative Medicine.—*Gratz:* Dr. Leopold Löhner has been recognised as *privat-docent* of Physiology.—*Königsberg:* Dr. A. Schittenhelm, Extraordinary Professor in the University of Erlangen, has been appointed Professor of Clinical Medicine in succession to Dr. Lichtheim, resigned.—*Marburg:* Dr. Alfred Bielschowsky, Extraordinary Professor in Leipsic, has been appointed to the chair of Ophthalmology and the Directorship of the University Ophthalmic Clinic, in succession to the late Dr. Bach.—*Modena:* Dr. R. Magnanimi, of Sassari, has been appointed to the chair of Forensic Medicine.—*Munich:* Dr. K. von Hess, Professor in the University of Würzburg, has been appointed to the chair of Clinical Ophthalmology, in succession to the late Dr. Eversbusch.—*Naples:* Dr. L. Minervi has been recognised as *privat-docent* of Internal Pathology, Dr. A. Lisanti as *privat-docent* of Operative Medicine, Dr. G. Define as *privat-docent* of Dermatology and Syphiligraphy, Dr. E. Salaris as *privat-docent* of Otology and Laryngology, and Dr. G. Tropeano as *privat-docent* of Social Medicine.—*Palermo:* Dr. S. Cannata has been recognised as *privat-docent* of Pædiatry, and Dr. A. Giordano as *privat-docent* of Hygiene.—*Parma:* Dr. F. Valtorta has been recognised as *privat-docent* of Midwifery and Gynæcology, Dr. G. Dalla Favera as *privat-docent* of Dermatology and Syphiligraphy, Dr. G. Pighini as *privat-docent* of Neurology and Psychiatry, and Dr. A. Splendore as *privat-docent* of Bacteriology.—*Prague (Bohemian University):* Dr. F. Procházka, *privat-docent* of Diseases of Workmen and Social Medicine, has been granted the title of Extraordinary Professor.—*Rome:* Dr. E. Grimani, of Florence, has been recognised as *privat-docent* of External Pathology.—*Sassari:* Dr. A. Ruju has been recognised as *privat-docent* of Psychiatry.—*Sienna:* Dr. A. de Cortes has been recognised as *privat-docent* of Surgical Anatomy.—*Tübingen:* Dr. Ottfried Müller, Extraordinary Professor, has been promoted to the chair of Clinical Medicine, in succession to Dr. von Romberg; Dr. August Mayer, *privat-docent* of Midwifery and Gynæcology, has been granted the title of Extraordinary Professor.—*Vienna:* Dr. Rudolf Fleckseder has been recognised as *privat-docent* of Medicine, and Dr. Béla Schick and Dr. Karl Lerner as *privat-docenten* of Children's Diseases.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held on Oct. 10th at Caxton House, Westminster, with Sir Francis H. Champneys in the chair. A letter was considered from a certified midwife practising in Chesterfield complaining of the issue by the Chesterfield division of the British Medical Association of a circular with reference to the conditions affecting the practice of midwifery in that town. A letter was considered on the same subject from a medical practitioner in Chesterfield. The Board decided that the reply be (*a*) that, if the midwife has obeyed the rules of the Board regulating the summoning of medical aid she has discharged her duties to the patient; and (*b*) that the Board had no authority over medical practitioners. The Board also directed that the correspondence be forwarded to the Privy Council. A letter was considered from the National Health Insurance Joint Committee inquiring as to the fee usually payable to a qualified medical practitioner when summoned on the advice of a midwife, and by what authority the fee is paid. The Board directed that the National Health Insurance Joint Committee be informed that the town councils of Liverpool, Manchester, and Cardiff have made agreements with all the medical men in their districts for a fee of 1 guinea all round when summoned to a case attended by a midwife, and that elsewhere the fee varies. That the authority by whom the fee is paid is the local supervising authority in Liverpool, Manchester, and Cardiff, and the guardians in some other places. A letter was considered from Mrs. M. B. Williamson, honorary secretary of the Birkenhead Maternity Hospital, asking for information as to the administration of the maternity benefit under the National Health Insurance Act. The Board decided that Mrs. Williamson be informed that the question has been before the General Medical Council, who have made representation on the subject to the Government.

THE GREAT ORMOND-STREET HOSPITAL FOR SICK CHILDREN.—The usual lectures, addresses, and demonstrations will be given this session at the hospital. The course begins on Thursday next, Oct. 24th, at 4 P.M., when Mr. E. M. Corner lectures on Joint Diseases and their Surgical Treatment.

WIGAN AND ITS SEWAGE SCHEME.—A charge of what was described as reckless expenditure and reckless administration was made at a recent meeting of the Wigan town council. It appears that although £7071 over and above the amount sanctioned by the Local Government Board in 1908 had been paid, £12,600 were still required to complete the scheme—i.e., £32,000 was needed to complete work which the council set out to do for £12,000. A subcommittee in their findings felt that "it was their duty to express surprise that the members of the committee having supervision of the work had not exercised that control which was expected of a departmental committee in charge of works of such importance." The recommendations of the subcommittee were unanimously approved.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—On Oct. 17th Dr. Nietner, of Berlin, delivered the inaugural lecture of the winter session at the Medical School for Diseases of the Chest, taking for his subject the Modern Combat against Tuberculosis amongst Children. On Oct. 21st Dr. Barty King will lecture on Physical Examination of the Chest, on Oct. 23rd Dr. P. B. Ridge on Morbid Anatomy, and on Oct. 24th Dr. Murray Leslie on Modes and Channels of Infection. The lecture hour is 4.30 P.M. A special clinical demonstration will be given on Oct. 25th at 3.30 P.M. A tuberculin course will commence on Oct. 28th, and will be continued each succeeding day at 4.30 P.M. till Nov. 1st, the lectures and subjects being as follows:—Dr. Ridge: Tuberculins. Dr. A. G. Phear: The Technique of Tuberculin Administration. Dr. Symes Thompson: Tuberculin Treatment, its Scope and Limitations. Dr. Barty King: The Practical Administration of Tuberculin for Diagnosis. Dr. Murray Leslie: The Practical Administration of Tuberculin for Treatment. On Nov. 2nd, at 10.30 A.M., this course will be concluded with a demonstration of cases in the wards. Other lectures and demonstrations which will be given at 3.30 P.M. or 4.30 P.M. are: Nov. 4th.—Dr. James Calvert: The Diagnosis of Early Pulmonary Tuberculosis. Nov. 5th.—Mr. Arthur Evans: Surgery of the Thorax. Nov. 7th.—Dr. Symes Thompson: The Various Means to be Adopted to Prevent the Spread of Pulmonary Tuberculosis. Nov. 8th.—A special clinical demonstration. Nov. 11th.—Dr. Arthur Davies: Pulmonary Tuberculosis in Relation to Life Insurance. Nov. 12th.—Dr. W. H. White: The General Treatment of Pulmonary Tuberculosis. Nov. 14th.—Dr. K. H. Kellie: The Diagnosis and Treatment of Pulmonary Tuberculosis in Childhood. Nov. 15th.—A special clinical demonstration. Nov. 18th.—Dr. J. H. Drysdale: The Rôle of the Circulatory System in Pulmonary Tuberculosis. Nov. 19th.—Dr. Barty King: Bronchitis, Emphysema, Pneumonia, and Pleurisy in Relation to Pulmonary Tuberculosis. Nov. 21st.—Dr. Symes Thompson: The Selection of Cases Suitable for Institutional (Sanatorium, Hospital, Infirmary), Domiciliary, and Dispensary Treatment. Nov. 22nd.—A special clinical demonstration. Nov. 25th.—Mr. Arthur Evans: Laryngeal Tuberculosis. Nov. 26th.—Dr. Phear: The Complications of Pulmonary Tuberculosis. Nov. 28th.—Dr. Murray Leslie: Prognosis in Pulmonary Tuberculosis. Nov. 29th.—A special clinical demonstration. Dec. 2nd.—Dr. Bryett (M.O.H. Borough of Shoreditch): Pulmonary Tuberculosis in Relation to Public Health. Dec. 3rd.—Dr. Phear: The Differential Diagnosis of Pulmonary Tuberculosis. Dec. 5th.—Dr. Jordan: The Diagnosis of Pulmonary Tuberculosis by the Röntgen Rays. Dec. 6th.—A special clinical demonstration. Dec. 9th.—The Sanatorium. Dec. 10th.—Dr. Ridge: The Examination of the Sputum; Estimation of Opsonic Index and Preparation of Vaccines. Dec. 12th.—Mr. George Thomson: The Teeth in Relation to Pulmonary Tuberculosis. Dec. 13th.—A special clinical demonstration. Dec. 16th.—Dr. Barty King: The Tuberculosis Dispensary as a Fighting Unit in the Campaign against Tuberculosis. Dec. 17th.—Dr. R. A. Gibbins (consulting officer): The Formation, Constitution, and Management of the Tuberculosis Dispensary. Dec. 19th.—Mr. G. H. Longton: Anæsthesia in Diseases of the Chest. Dec. 20th.—A special clinical demonstration. In connexion with the lectures visits to sanatoriums will be made.

WORTHING HOSPITAL.—A debt of £1400 remains on the recent extension of Worthing Hospital, and the mayor has received an anonymous offer to double up to £500 the amount that is subscribed between now and the end of the year.

WEST SUSSEX PHTHISIS CASES: THE MEDICAL FEES.—The West Sussex Insurance Committee has approved of the provisional scheme formulated by Mr. A. G. R. Cameron, consulting medical officer for the administration of the sanatorium benefit under the National Insurance Act. Mr. Cameron says that no arrangements have yet been made by the county council for treatment in sanatoriums or at dispensaries, and the treatment of persons suffering from tuberculosis must, therefore, for the present be almost entirely domiciliary. He suggested dividing the area of the county into four districts with a subcommittee for each. As to the question of fees for medical attendance on insured persons the scale, Mr. Cameron said, had been considered by the local medical profession and had been agreed to with the exception of one or two items. The fees he suggested were as follows:—

	s.	d.
Attendance at patient's home and three days' medicine ...	3	6
Attendance at doctor's surgery and three days' medicine ...	2	6
Medicine, without advice, if further supply needed	1	6
Bacteriological examinations, if required	4	6
Visits over 1 mile and under 3 from doctor's home, extra ...	1	6
Visits over 3 miles and under 5, extra	4	0
Certificates as outlined in Form Med. 1	2	6
Special reports as required in Art. 2 (5) L.G.B. Order and Par. 11. Commissioners' circular letter	2	6

Special drugs, &c., would be extra and night and Sunday visits would be at the rate of one visit and a half. Mr. Cameron told the committee that the local medical men had suggested that the extra mileage over five miles should be an additional 1s. per mile and that the night visits should be at the rate of two visits instead of a visit and a half. Mr. Cameron's scheme was approved on the understanding that it was only to be in operation until January, when the matter comes before the county council.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At the annual meeting of the Society of Medical Officers of Health held on Oct. 11th the presidential address was delivered by Dr. E. W. Hope, medical officer to the City and Port of Liverpool, and Professor of Public Health in the University of Liverpool, who took for his subject the Expanding Scope of Sanitary Administration. After referring to the great diminution in the rate of mortality during the past 15 years, he stated that the prolongation of human life, the extension of its usefulness, the diminution of suffering, and the increase in national vigour following improvements in sanitation were results equally important. The present time was one of great expansion in every field of sanitary investigation and administration, and probably at no period had the thinking world given more attention to it than now. The prolonged immunity of the country from small-pox, notwithstanding the growing neglect of vaccination, was largely due to the improved administrative methods which embraced not only more prompt notification and isolation of the patient and vaccination of contacts, but greater vigilance and extended measures at the ports of entry. He enumerated a long list of important enactments during the last dozen years in matters affecting the public health, and said that the Midwives Act furnished a good illustration of the difficulties that beset the legislator in forecasting the necessities of the case. An important omission in this Act was the means by which some of the chief responsibilities were to be met, and although the Act had been in operation for ten years, those omissions had not been supplied. Local authorities had had to meet this omission, and supply the means by which emergency assistance could be rendered to women. By the Insurance Act a sum of 30s. for the benefit of the lying-in patient was provided, and this should insure not only good attendance but emergency assistance when necessary. After referring to the lessening of administrative overlapping due to the unification of sanitary

districts, Professor Hope stated that the Board of Education and the Local Government Board had wisely realised that the improvement in health and physique of children and the removal of bad influences were closely associated with general public health administration, and prudently advised that the work of medical inspection should be carried out in close connexion with medical officers of health. As regarded the work of the Port Sanitary Authorities, he thought it would become more onerous and important in keeping out disease from centres where it was still rampant. Referring to the tuberculosis sections of the National Insurance Act, he expressed the opinion that all administrative details, all schemes, plans, and arrangements affecting the prevention of tuberculosis must depend for their success upon the efficiency of sanitary administration.

THE AFTER-CARE ASSOCIATION.—Lady Battersea has placed Surrey House, Marble Arch, London, W., at the disposal of the Ladies' Guild connected with the After-Care Association for Poor Persons Discharged Recovered from Asylums for the Insane, and a *café chantant* and model market will be held there on Thursday, Oct. 24th, from 2 to 7 P.M., in aid of the funds of the guild. Tickets may be obtained from the honorary secretary, Mrs. Ironside Bruce, 10, Chandos-street, Cavendish-square, W., for 2*s.*, or can be purchased at the door for 2*s.* 6*d.* The services of a number of well-known artistes have been secured.

THE inaugural lecture of the winter session at the Central London Throat and Ear Hospital will be delivered by Dr. J. Dundas Grant at 3 P.M. on Friday, Oct. 25th, the title of the lecture being "Some Views in Oto-Rhino-Laryngology Reviewed; Some Criticisms Criticised."

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Mental Deficiency Bill.

STANDING Committee "B" of the House of Commons has resumed its consideration of the Mental Deficiency Bill. On Tuesday, Oct. 15th, some hours were spent in discussing the composition of the proposed Board of Control. In pursuance of his undertaking given earlier in the session, Mr. MCKENNA, the Home Secretary, brought forward an amendment to provide that, instead of creating a new body of Commissioners to deal with the mental defective, there should be a single Board of Control appointed to deal alike with lunatics and mental defectives. The text of the Home Secretary's proposal was as follows:—

"(1) There shall be constituted a Board of Control consisting of not more than 15 Commissioners, of whom not more than 12 shall be paid Commissioners, and of the paid Commissioners four shall be legal Commissioners; that is to say, barristers of at least five years' standing, and four at least shall be medical Commissioners; that is to say, duly qualified medical practitioners, and one at least shall be a woman.

"(2) The Commissioners shall be appointed by His Majesty on the recommendation, as respects the legal Commissioners and the unpaid Commissioners, of the Lord Chancellor, after consultation with the Secretary of State, and, as respects the other Commissioners, of the Secretary of State, after consultation with the Lord Chancellor."

This amendment was subjected to considerable criticism. Some members of the Committee insisted that the arrangement proposed by Mr. MCKENNA would not lead to sound administration, and that the vesting of the appointments in two great officers of State would lead to friction. A further point of complaint was that the plan submitted by the Home Secretary would withdraw the operation of the Act from the control of Parliament. Mr. MCKENNA dissented from these criticisms. The duty of the Commissioners, he said, would be carefully defined. At first, there would be 11 of the 15 Commissioners appointed by the Lord Chancellor, and the remaining four would be nominated by the Home Secretary. But as vacancies occurred the Board would assume a form in which seven members, four of whom would be paid and three unpaid, would be appointed by the Lord Chancellor and eight by the Home Secretary. The Parliamentary responsibility for expenditure would also rest with the Home Secretary. A proposal which was made to modify Mr. MCKENNA'S amendment by reducing the number of paid Commissioners from 12 to 11 was defeated on a vote. The amendment was still under discussion when the Committee rose for the day.

Telegraphists' Cramp.

Representations in respect to the prevalence of telegraphists' cramp amongst telegraph operators in the Post Office have been made to the Select Committee of the House of Commons which is instituting an inquiry into certain administrative matters connected with that department. A representative of the Postal Telegraph Clerks' Union on Tuesday, Oct. 15th, stated to the Committee that it was impossible to obtain a correct return of the number of men who were affected by the disease. The telegraph operators concealed the presence of the disease as far as possible, because they feared that on its discovery in its earlier manifestations their chances of promotion would be lost, or they would be transferred to less desirable work. This witness expressed the opinion that telegraphists' cramp had become more prevalent than it had ever been before.[1]

The Direct Representatives on the General Medical Council.

Viscount MORLEY of BLACKBURN, as President of the Council, has introduced a Bill in the House of Lords to regulate the election of the Direct Representatives on the General Medical Council. Its object is thereby to remedy a defect in the Medical Act of 1886, and to permit the General Medical Council to economise its outlays on the irregularly recurring elections. At present a Direct Representative on the General Medical Council holds office for five years from the date of his election. If a vacancy occurs by death during the course of this term a new representative has to be elected. His appointment also runs for five years. It thus happens that there have to be elections at irregular intervals. It is understood that Lord MORLEY'S Bill is designed to put an end to this overlapping. All the Direct Representatives are to cease to hold office on Dec. 31st, 1916, and regular elections for all the Direct Representatives shall thereafter take place at intervals of five years. It is also provided that vacancies occurring in the last year of the term are not to be filled until the succeeding election. A reform of this nature has been urged by the President of the General Medical Council, and representations have been made to the Privy Council to induce that body to bring the matter before Parliament for the necessary legislative sanction.

HOUSE OF COMMONS.

WEDNESDAY, OCT. 9TH.

Hospital Accommodation at Rosyth.

In reply to Mr. BOOTH, Mr. MACNAMARA, Secretary to the Admiralty, said: As regards hospital accommodation for the workmen employed at Rosyth there is ample provision for rendering first-aid. Two medical men are retained, one of whom is always at his surgery about two and a half miles from the works and within call. The other can reach the works in a few minutes by motor-car. Hand stretchers and two fully-equipped railway hospital wagons capable of holding 26 injured men on stretchers are kept on the works. For serious accident cases the Dunfermline and Western Fife Hospital, distant three and a half miles from the works, is available. 58 cases of injury have been admitted since the commencement of the contract. The hospital contains over 60 beds, and has never had to refuse a case from the Rosyth works. The contractors make a contribution to the funds of the hospital. There is also the local Poor-law infirmary, an admirably equipped hospital, and also suitable infectious disease hospital accommodation provided by the local authorities.

THURSDAY, OCT. 10TH.

Remuneration of Medical Profession.

Sir NORVAL HELME asked the Chancellor of the Exchequer whether, in view of the general desire throughout the country to secure a settlement of the scale of remuneration for medical services under the National Insurance Act, he would consider, on request being made, the appointment of a Select Committee to take evidence and report to the House of Commons as to what would be adequate remuneration for the medical profession.—Mr. LLOYD GEORGE replied: I am obliged to my honourable friend for his suggestion, but I fear it would hardly be possible for a Select Committee to complete its investigations and issue its report in time to enable me to make effective use of the report before Jan. 15th.

Insured Persons and the Free Choice of Medical Man.

Mr. CHARLES BATHURST asked the Secretary to the Treasury whether it had been decided by the Health Insurance Commissioners that insured persons who were members of approved societies would be deemed to have exercised their free choice of a doctor if they had agreed, as a condition of membership, to abide by the decision of the majority of their society or club; and, if so, whether, in view of the prevailing ignorance on the matter among members of approved societies, the Commissioners would make known this decision through the public press.—Mr. MASTERMAN said in reply: The Insurance Commissioners have not come to any such decision as is suggested in the question. Every insured person has a right individually to select any doctor on the panel or to obtain medical treatment in some other manner, and this right is fully preserved by the Regulations, which provide that the appropriate forms of application shall be filled up by the insured person.

Workmen's Compensation and Medical Benefits.

Mr. SUTTON asked the Secretary to the Treasury whether, in the event of an employed contributor suffering an accident whilst following his employment, for which he received compensation to an amount which precluded him from sickness benefit, he would be entitled to medical benefits.—Mr. MASTERMAN replied: The answer is in the affirmative.

Isolation Hospitals and Tuberculous Patients.

Mr. HUME-WILLIAMS asked the President of the Local Government Board how many isolation hospitals in the country were, or were going to be, used in pursuance of the National Insurance Act for the reception of tuberculous patients; and what, if any, arrangements were being made in such cases to provide accommodation, in case of an outbreak of infectious disease, for those who had to be at once isolated, and for whom the hospitals were constructed.—Mr. BURNS said in

[1] In THE LANCET, March 30th, April 6th, and April 13th, 1912, will be found a full report on the subject by Dr. H. Theodore Thompson and Dr. J. Sinclair.

reply: There are at present 38 isolation hospitals in England and Wales which have been approved for the purpose of providing treatment for insured persons suffering from tuberculosis. It is not possible to say what number may hereafter be provided, but in all cases the necessity of having suitable arrangements for dealing with outbreaks of every infectious disease will be kept in view.

Motor Ambulances and the Petrol Tax.

Sir JOHN RANDLES asked the Chancellor of the Exchequer whether, according to his promise, he had considered the question of a rebate on motor spirit used for motor ambulances to convey patients to hospitals and infirmaries, and was now prepared to make it clear that motor spirit used for this purpose should enjoy the exemptions allowed to certain other users of motor spirit.—Mr. LLOYD GEORGE answered: I am prepared to propose an amendment in the law on this point when opportunity offers.

The Ventilation of the House of Commons.

Sir J. D. REES asked the honourable Member for St. George's-in-the-East, as representing the First Commissioner of Works, whether the Commissioner of Works had read the address of Dr. Leonard Hill, as president of the physiological section of the British Association, in which he explained how deadly was uniformly heated air, how necessary perceptible movement and change of temperature, how injurious were the effects of a still, close, equable atmosphere; and whether he would take steps to alter the present system of ventilation of the House, so as to bring it more into accord with these sanitary principles.—Mr. WEDGWOOD BENN answered: The ventilation of the chamber has been the subject of several inquiries by Committees between 1902 and 1906. Over £5000 has been spent in carrying out the recommendations of those Committees and the reports of Dr. Mervyn Gordon. The air in the chamber is constantly in movement, and is changed about six times an hour. A uniform temperature is maintained. The First Commissioner is not of opinion that any alteration in the ventilating system would be desirable.

MONDAY, OCT. 14TH.

Opium Production in China.

In reply to Sir J. D. REES, Mr. WEDGWOOD BENN (on behalf of the Foreign Secretary), said: Information received from His Majesty's Diplomatic and Consular representatives in China gives evidence of the inability of the Central Government at Peking to impose its will on the authorities of the provinces. The same information also shows that since the outbreak of the revolution China has signally failed to carry out the stipulation in Article 1 of the Anglo-Chinese Agreement of May 8th, 1911, providing for the progressive diminution of opium production throughout the country. I cannot say that there are any indications at present to warrant the hope that the Central Government will be able in the near future to enforce the discontinuance of poppy cultivation, but I trust that the gradual restoration of normal conditions, which I believe to be in progress, may ultimately lead to this result.

Administration of Medical Benefit.

Mr. LANSBURY asked the Secretary to the Treasury, with reference to the provisional regulations as to the administration of medical benefit made under the National Insurance Act, and dated Oct. 1st, 1912, whether it was intended that each Local Insurance Committee should fix each year a total sum to be paid for medical benefit, which was not to be exceeded, and out of which the payments for ordinary medical treatment, the payments for special services by the doctors, and the payments for drugs and medicines were alike to come; whether it was intended that, when a capitation fee or a rate of payment per visit had been agreed on, the medical practitioner would not necessarily get that fee or that rate, but only such a proportion thereof as the total sum arbitrarily fixed by the Local Insurance Committee for the various items of expenditure will allow; whether he was aware that, under such circumstances, the medical practitioners would find themselves getting a smaller annual remuneration whenever the sickness of the year had necessitated a larger outlay on drugs and medicines, so that, for instance, when an influenza epidemic involved more quinine than usual, the medical practitioners would find their incomes reduced; whether he was aware that such an arrangement was in contravention of the spirit of Section 15 (5), proviso (ii), which was intended to prevent the medical practitioner from having any pecuniary interest in stinting the supply of expensive drugs; whether he was aware that the arrangement was calculated to restrict the calling in of consultants in serious cases, as the cost of their fees would, in effect, have to be borne by the ordinary medical practitioners themselves; whether he would explain on what basis the Local Insurance Committee could, or would be instructed or advised to, fix the total sum to be paid in respect of medical benefit if, as explained, this was expected to be less than the aggregate of the sums payable to the medical practitioners for fees and extras at agreed rates and for drugs and medicines at agreed prices; and whether he would arrange that the House should have an opportunity of discussing the terms to be made for medical benefit before these were approved by the Commissioners.—Mr. MASTERMAN answered: The draft regulations now before Parliament cannot be interpreted except in connexion with the general question of remuneration for medical benefit under the Insurance Act. This question is still under the consideration of the Government, and my right honourable friend the Chancellor of the Exchequer hopes to make an announcement on the subject in the immediate future.

The Capitation Grant under the Insurance Act.

Mr. OLIVER LOCKER-LAMPSON asked the Secretary to the Treasury to state how much additional money would be required to pay the doctors under the National Insurance Act 8*s.* 6*d.* per head instead of the sum originally decided upon.—Mr. MASTERMAN replied: If by the sum originally decided the honourable member means the sum of 6*s.* per insured person in the original actuarial estimates as the cost of medical benefit, the additional sum required to raise the 6*s.* to 8*s.* 6*d.* would be approximately one and a half millions a year.

TUESDAY, OCT. 15TH.

The Sale of Milk in Scotland.

Dr. CHAPPLE asked the Secretary for Scotland whether his attention had been drawn to a case in which a prosecution under the Sale of Food and Drugs Act failed, because it was shown that the milk, though under standard, was in the same condition as when taken from the cow, and whether he was prepared to make any amendment of the law as it applied in Scotland.—Mr. MCKINNON WOOD replied: My attention has been drawn to that decision, but I am not prepared to give a pledge on the subject. The whole question of milk-supply regulation is under consideration at the present time.

Malaria in Bombay.

Mr. O'GRADY asked the Under-Secretary of State for India whether any special steps were being taken to deal with the prevalence of malaria in Bombay; and, if so, would he state what they were.—Mr. H. BAKER (on behalf of Mr. MONTAGU) replied: The report submitted by Dr. Bentley, the officer appointed by the Bombay Government to investigate the causes of malaria in Bombay, has been accepted by the Bombay Municipal Corporation, and effect will be given by it to the measures proposed by him for exterminating the malarial mosquito. To this end the health establishment of the city will be strengthened and powers taken by amendment of the Municipal Act to deal with private wells in the interior of houses and with other like breeding grounds of the mosquito.

WEDNESDAY, OCT. 16TH.

The Administration of Maternity Benefit.

Mr. CHARLES BATHURST asked the Secretary to the Treasury whether the Health Insurance Commissioners had issued or proposed to issue provisional regulations for the uniform administration of maternity benefit under the National Insurance Act, or whether it was open to each Insurance Committee to make its own arrangements and regulations in reference thereto.—Mr. MASTERMAN replied: The Commissioners are not authorised to issue such regulations, but they propose to issue model rules for the administration of benefit by Insurance Committees to deposit contributors. The maternity benefit of members of approved societies is administered by the societies.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, London.

Manual of Chemistry. A Guide to Lecturers and Laboratory Work for Beginners in Chemistry. A Text-book specially adapted for Students of Medicine, Pharmacy, and Dentistry. By W. Simon, Ph.D., M.D., Professor of Chemistry in the College of Physicians and Surgeons of Baltimore, and in the Baltimore College of Dental Surgery; and Daniel Base, Ph.D., Professor of Chemistry in the Maryland College of Pharmacy, Department of the University of Maryland. Tenth edition, thoroughly revised. Price 15*s.* net.

The Course of Operative Surgery. A Handbook for Practitioners and Students. By Prof. Dr. Victor Schmieden, Privatdozent of Surgery in the University of Berlin, Assistant in the Royal Surgical University Clinic. Second enlarged edition. With a Foreword by Prof. Dr. A. Bier. Translated and edited by Arthur Turnbull, M.B. Glasg., M.A., B.Sc., Demonstrator of Anatomy in the University of Glasgow. Price 12*s.* 6*d.* net.

Aids to the Diagnosis and Treatment of Diseases of Children. By John McCaw, M.D. R.U.I., L.R.C.P. Edin., Senior Physician to the Belfast Hospital for Sick Children. Fourth edition. Price, paper, 3*s.* 6*d.* net; cloth, 4*s.* net.

BUTTERWORTH AND CO., Bell-yard, Temple Bar, London; and at Sydney and Calcutta.

Workmen's Compensation Digest. Containing every reported Decision of Present Authority in the House of Lords and the Supreme Court of Judicature in England decided up to May 15th, 1912, and in the Court of Session in Scotland and the Supreme Court of Judicature in Ireland reported up to May 15th, 1912, under the Workmen's Compensation Acts, 1897, 1900, and 1906. By Douglas Knocker, Esq., of the Middle Temple and South-Eastern Circuit, Barrister-at-Law, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., D.P.H. Lond. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication*

BANISTER, J. BRIGHT, M.D., B.C. Cantab., has been appointed Physician to Out-patients at Queen Charlotte's Lying-in Hospital.

BOYD, SIDNEY, M.S. Lond., F.R.C.S. Eng., has been appointed Surgeon to In-patients at the Belgrave Hospital for Children.

DAVID, A. S., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Ongar District of the county of Essex.

DONALD, ARCHIBALD, M.D. Edin., M.R.C.S., has been appointed to the Chair of Obstetrics and Gynæcology in the Manchester University.

FOX, E. H. B., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Yealmpton District of the county of Devon.

HALL, J. A. T., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer for the Stoke Golding District of the Hinckley Board of Guardians.

HENDERSON, WILLIAM T., M.B., B.Ch. R.U.I., has been appointed Second Assistant Medical Officer at Hawkhead Asylum, Paisley.

HICKS, J. A. BRAXTON, M.D., B.S. Lond., D.P.H. Cantab., has been appointed Pathologist and Registrar at Queen Charlotte's Lying-in Hospital.

HOWELL, B. WHITCHURCH, M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Royal Free Hospital.

MACCORMAC, HENRY, M.B. Edin., M.R.C.P. Lond., has been appointed Assistant Physician to the Department for Diseases of the Skin at the Middlesex Hospital.

MCKENZIE, HARRY VALENTINE, M.D., C.M. Edin., has been appointed Honorary Ophthalmic Surgeon to the Newton Abbot (Devon) Hospital.

WATT, ERNEST, M.D. Glasg., D.P.H., has been appointed Chief Tuberculosis Officer for the County of Durham.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH EYE INFIRMARY.—Honorary Surgeon.

BIRKENHEAD BOROUGH HOSPITAL.—Senior House Surgeon and Junior House Surgeon. Salary £100 and £80 per annum respectively, with board and laundry.

BIRMINGHAM, CITY FEVER HOSPITAL.—Assistant Medical Officer. Salary £150 per annum, with board and residence.

BIRMINGHAM CORPORATION FEVER HOSPITAL.—Medical Superintendent. Salary £250 per annum, with board.

BOURNEMOUTH, ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, lodging, and laundry.

BRADFORD ROYAL INFIRMARY.—House Physician, unmarried. Salary £100 per annum, with board, residence, and washing.

BRISTOL GENERAL HOSPITAL.—First House Physician, Second House Physician, and Casualty House Surgeon, all for six months. Salary £80 per annum, with board, residence, &c. Also Senior House Surgeon. Salary £120 per annum, with board, residence, &c.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Junior Resident Officer. Salary £80 per annum, with board, rooms, and attendance.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

CARDIFF, KING EDWARD VII.'s HOSPITAL.—House Surgeon for six months. Salary £30, with board, residence, and laundry.

CARDIFF UNION WORKHOUSE.—Assistant Medical Officer, unmarried. Salary £150 per annum, with rations, apartments, attendance, and washing.

CATERHAM ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

CHARING CROSS HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board and residence.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and residence.

DERBY, DERBYSHIRE COUNTY COUNCIL.—Assistant Tuberculosis County Medical Officer. Salary £400 per annum.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried. Salary £50 first six months, £75 second six months, and at rate of £150 per annum during second year. Also Assistant House Surgeon, unmarried. Salary at rate of £75 per annum, with board and laundry.

DUDLEY, GUEST HOSPITAL.—Senior Resident Medical Officer. Salary £120 per annum, with board, residence, attendance, and washing. Also Assistant House Surgeon for six months. Salary £100 per annum, with residence, board, and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Physician for six months. Salary at rate of £75 per annum, with board, residence, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, London, N.—Resident Medical Officer. Salary £120 per annum, with board, lodging, and laundry.

GRIMSBY AND DISTRICT HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board, lodging, attendance, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HALIFAX ROYAL INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HASTINGS, EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary at rate of £70 per annum, with residence, board, and washing.

HONG-KONG UNIVERSITY.—Professor of Physiology. Salary not less than £600 per annum, with free bachelor quarters.

ISLE OF MAN LUNATIC ASYLUM AND HOME FOR THE POOR.—Assistant Medical Officer. Salary £170 per annum, with board, quarters, and washing.

KENSINGTON DISPENSARY AND CHILDREN'S HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, apartments, and laundry.

LEEDS CITY DISPENSARY.—Tuberculosis Medical Officer.

LEEDS GENERAL INFIRMARY.—Resident Medical Officer at Ida and Robert Arthington Hospitals. Salary £60 per annum, with board, residence, and laundry. Also Resident Obstetric Officer for six months. Salary £50 per annum, with board, residence, and laundry. Also Three House Surgeons, without salary, but with board, residence, and laundry.

LEICESTER ROYAL INFIRMARY.—Second House Surgeon, Assistant House Surgeon, and Assistant House Physician, all for six months. Salary of former £120 and of two latter at rate of £80 per annum, with board, apartments, and washing.

LINCOLN, COUNTY HOSPITAL.—Senior House Surgeon, unmarried. Salary £125 per annum, with board, lodging, and washing.

LONDON COUNTY COUNCIL: SCHOOL CLINIC FOR CAMBERWELL AND BERMONDSEY.—Two Anæsthetists; Three Medical Officers for Nose, Throat, and Ear; One Medical Officer for Errors of Refraction; One Medical Officer for the X Ray Treatment of Ringworm; One Medical Officer for Minor Ailments. Salary £50 per annum for one half day's work a week.

LONDON HOSPITAL, E.—Assistant Obstetric Physician.

LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Salary at rate of 50 guineas per annum, with board, residence, and washing.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board and residence.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £200 per annum, with quarters, attendance, washing, &c.

MANCHESTER CHILDREN'S HOSPITAL, OUT-PATIENTS' DEPARTMENT, Gartside-street, Manchester.—Assistant Medical Officer for six months. Salary £25.

MANSFIELD AND MANSFIELD WOODHOUSE DISTRICT HOSPITAL.—Resident House Surgeon, unmarried. Salary £120 per annum, with board, residence, and washing.

MARGATE, ROYAL SEA BATHING HOSPITAL FOR SURGICAL TUBERCULOSIS.—Resident Surgeon. Salary at rate of £100 per annum for first six months and £120 for last six months, with board, residence, and laundry.

MERTHYR TYDFIL, BOROUGH OF.—Medical Inspector of School Children. Salary £250 per annum.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon, all for six months. Salary of two former at rate of £60 per annum and of two latter at rate of £40 per annum, with board and washing.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon. Salary £7 per annum, with board, residence, and washing.

MIDDLESEX COUNTY ASYLUM, near Tooting, S.W.—Junior Assistant Medical Officer.

NORWICH, NORFOLK AND NORWICH HOSPITAL.—House Surgeon. Salary £80 per annum. Also Casualty Officer for six months. Salary £60 per annum. Each with board, lodging, and washing. Both unmarried.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £170 per annum, with apartments, attendance, light, and fuel.

OLDHAM ROYAL INFIRMARY.—Third House Surgeon for six months. Salary at rate of £80 per annum, with residence, board, and laundry.

PARIS, HERTFORD BRITISH HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

POPLAR (BOROUGH OF) DISPENSARY FOR THE PREVENTION OF CONSUMPTION, Alexandra House, 135, Bow-road, E.—Tuberculosis Officer. Salary £500 per annum.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Senior House Physician. Salary £75 per annum. Senior House Surgeon. Salary £75 per annum. Junior House Physician. Salary £50 per annum. Junior House Surgeon. Salary £50 per annum. All for six months, with residence, board, and laundry.

PRUDENTIAL ASSURANCE COMPANY, Holborn Bars, London.—Medical Officer. Salary £500 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Surgeon for six months. Salary £80 per annum, with board, residence, and washing.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon for six months. Salary £80 per annum, with apartments, board, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Dental Surgeon. Also Medical Officer in Charge of Department for X Rays and Electro-therapy. Salary at rate of £90 per annum.

ST. BARTHOLOMEW'S HOSPITAL.—Two Chief Assistants in X Ray Department.

SALFORD UNION INFIRMARY.—Resident Assistant Medical Officer, unmarried. Salary £120 per annum, with apartments, attendance, and rations.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY.—Assistant Resident Medical Officer. Salary £100 per annum, with board and apartments.

WAKEFIELD GENERAL HOSPITAL.—Second House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

WARWICK COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £175 per annum, with board, apartments, and laundry.

WEST AFRICAN MEDICAL STAFF.—Appointments. Salary £400 per annum.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Surgeon.

WESTERN SKIN HOSPITAL.—Honorary Physician.

WINSLEY SANATORIUM FOR CONSUMPTIVES, Winsley, near Bath.—Resident Medical Officer, unmarried. Salary £300 per annum, with board and lodging.

WOLVERHAMPTON UNION WORKHOUSE.—Assistant Resident Medical Officer and Medical Officer of Cottage Homes, unmarried. Salary £150 per annum, with apartments, rations, &c.

Births, Marriages, and Deaths.

BIRTHS.

BROWN.—On Oct. 10th, at Perrymead, Streatham, S.W., the wife of Dr. Thomas H. Brown, of a daughter.

FELL.—On Oct. 10th, at Flan How, Ulverston, the wife of Major M. H. G. Fell, R.A.M.C., of a daughter.

ROBERTS.—On Oct. 12th, at Ravensbourne, Victoria Park, Manchester, the wife of Charles Roberts, M.B., B.S., F.R.C.S. (*née* Ethel Nicholson), of a son.

SINCLAIR.—On Oct. 8th, the wife of Dr. H. W. Sinclair, of a daughter.

TAYLOR.—On Oct. 7th, at Melville-street, Edinburgh, the wife of Dr. Macrae Taylor, of a son.

TAYLOR.—On Sept. 28th, at Toungoo, Burma, the wife of W. R. Taylor, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

GASKELL—RADEN.—On Oct. 10th, at Little Shelford, Cambs, John Foster Gaskell, M.D., to Margaret, daughter of John Frederick Raden, of Little Shelford.

ILOTT—SATTERTHWAITE.—On Oct. 12th, at the Parish Church, Bromley, Kent, Dr. Cyril Herbert Thomas Ilott, Bromley, to Lucy Annette, eldest daughter of Colonel E. Satterthwaite, C.B., and Mrs. Satterthwaite, of Bromley, Kent.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CHOLERA IN ITALY.

Mr. M. Carmichael, British Consul at Leghorn, in his annual report to the Foreign Office, observes that the public health of Leghorn, as a rule, is excellent, and the city enjoys one of the lowest death-rates in Italy. But during 1911, unfortunately, the town was visited, like so many other places in Italy, with a somewhat grave epidemic of cholera morbus. Two cases occurred on July 6th, followed by two more cases and one death on July 7th. The epidemic was at its highest between August 11th and 22nd. The greatest number of fresh cases in any one day was 67 on August 13th, and the greatest number of deaths 28 on August 14th, the average for this period of 12 days being 39 cases per day and 17 deaths. The last case occurred on Sept. 10th. There were two deaths on Sept. 14th, and with that the epidemic may be said to have ceased. The total number of cases between July 6th and Sept. 14th was 832, and the total number of deaths 428, or about 51 per cent. Sufficient praise cannot be given to the local authorities and such charitable associations as the Misericordia and the Pubblica Assistenza for the thorough and courageous manner with which the disease was combated. The families where cases occurred were immediately removed from their homes and isolated in one of the lazzaretti for a number of days. The town was constantly sprinkled with disinfectants by means of hand watering-carts, and free disinfectants were distributed to all the poorer classes. The market was rigorously inspected every day, and all damaged fruit or suspected provisions destroyed. Hygienic rules of self-preservation were printed and circulated, and every effort made to teach the people their duty in the trying circumstances. It was impressed upon them that all water must be boiled and absolutely no uncooked food eaten. There is a prejudice in Italy, even among some of the better class, against drinking water which has been boiled, while the fuel necessary for the purpose was a serious tax on the very poor. Fuel was supplied gratis by the municipality, and water which had been boiled was distributed at one or two centres of the town. As regards the cooking of all articles of consumption, this, of course, could not possibly be controlled, and there is no doubt that raw fruit, cheese, butter, ham, &c., were freely eaten. Even bread is a source of danger, for though baked it passes through various hands before reaching a house. The bathing season, on which various classes rely for the extra gain that enables them to tide over the year, was completely ruined by the epidemic. The strangers who had arrived immediately left the town, sacrificing the rent of the villas which they had paid in advance, and very many of the townspeople likewise departed. The consequence was severe losses to the poorer classes, while trade and commerce generally suffered. Subjoined are statistics of previous cholera epidemics in Leghorn: 1835, August 6th to Oct. 9th, 2018 cases, 1132 deaths; 1854, July 15th to Sept. 23rd, 1032 cases, 593 deaths; 1855, May 17th to Nov. 4th, 1783 cases, 987 deaths; 1867, July 14th to Nov. 5th, 1275 cases, 824 deaths; 1893, Sept. 10th to Oct. 30th, 379 cases, 172 deaths.

THE HATPIN DANGER.

THE Tramways Committee of the Manchester Corporation have taken an important step with a view to minimise the risks associated with the wearing of long hat-pins by ladies using their tramcars. The following notice has been posted in the Manchester tramcars:—

DANGEROUS HATPINS.

The attention of lady passengers is drawn to the danger to other passengers and to the servants of the department from the practice of wearing unprotected hatpins.

A similar procedure will be introduced in Salford, where several nasty accidents have already occurred. If need be, it may be necessary to apply for a bye-law making it compulsory to wear hatpin protectors.

THE PUBLIC-HOUSE TRUST.[1]

THIS little pamphlet contains details of a scheme which bids fair to bring about the settlement of a problem involving the deepest interests of the population of this land. The evils, both physical and moral, to which an abuse of the use of alcoholic drinks gives rise are known to all, and to no section of the community better than to medical men. Intoxicants in one form or another are a practically universal form of indulgence all over the world, and although the human race may in time deliver itself from the desire for such indulgence the time is obviously not yet. The Home Counties Trust operates in all parts of the Home Counties, except Surrey and Cambridgeshire, which are represented by separate companies, and its objects are to convert the present licensed house, which is only too often a mere drink shop, into an "idealised house of rest, refreshment, and recreation." In other words, the village or other public-house is to be gradually transformed into a kind of cross between a club and a restaurant. How this is being done may be read in Mr. Part's account of the movement, and in the preface contributed by Earl Grey, the practical founder of the movement. We cannot imagine, so far as present circumstances are concerned, a better system for fighting against the evils of drink. Medical men, as a whole, are not blessed with over much of this world's goods, but they can influence their wealthy patients to take an interest in this admirable movement. No higher dividend is paid than 5 per cent.; any profits over and above this are put to reserve and administered by the council for objects of public utility. Any further information may be obtained from the Secretary, Dean's-yard.

[1] The Public-House Trust: its Influence upon Temperance and Licensing Problems. By A. F. Part, Managing Director of the Home Counties Public-house Trust, Limited. To be obtained from the secretary, Central P. H. Trust Association, 15, Dean's-yard, Westminster. Pp. 62. Price 6d.

THE VISION OF MYOPES.

To the Editor of THE LANCET.

SIR,—I have observed some correspondence in your columns lately with reference to myopia. This has recalled to my mind some reference to the subject in THE LANCET of 1903 and my letter in THE LANCET of April 30th, 1904, with reference to one or two simple aids to myopic eyes, or, bluntly speaking, "dodges." Here is another simple aid which I happen to have discovered, and one or two myopic friends who have tried it tell me it may be worth recording. Join the tips of the index fingers of each hand, nails uppermost, in a horizontal line, then join the tips of the thumbs and bring them up till they come in contact with the tips of the index fingers. It will then be seen that a lozenge- (or diamond-) shaped space or window is produced between the four tips. Raise the hands while keeping them in the above position quite close to the right or left eye and look through the lozenge-shaped space, and the effect will be like that produced when looking through a concave lens. The lozenge-shaped "window" may be made larger or smaller, as required for focussing, by pressing together or relaxing slightly the four tips of the fingers and thumbs. If a very small aperture or "window" is required, remove one of the thumbs and bring the index finger slightly down, which will leave a small triangular space between the two index fingers and one thumb.

I am, Sir, yours faithfully,

Oct. 8th, 1912. MYOPE.

NYASALAND PROTECTORATE.

A REPORT on the Blue Book of this Protectorate (which comprises the eastern portion of British Central Africa) for the year 1911–12 has been received at the Colonial Office. It states that the native population is now estimated at 1,000,659, whilst the European population is returned as 773 and the Asiatic population as 463. Seven European deaths (including two infants) and three Asiatic deaths were registered during the year. The health of the native community has been satisfactory, and no serious epidemics occurred. Small-pox made its appearance here and there, but the benefits of the widespread and thorough vaccination of the last few years are now being felt, and in no case has the disease spread. The number of cases diagnosed as sleeping sickness discovered during the year was small; it must, however, be borne in mind that, in spite of the efforts of the large medical staff now employed in searching for cases, it is probable that deaths from this disease are concealed by the natives, in whom confidence is somewhat shaken by the inevitably high proportion of deaths in the sleeping sickness camps. Since 1908, when the first case of sleeping sickness was discovered, 56 cases only have been found after systematic search. All these are dead. The epidemic appears, as far as present investigations have determined, to be confined to a small area bordering on the lake. The Royal Society's Commission is established and is pursuing its investigations at Kasu, near the sleeping sickness area.

DRAWINGS OF GUY'S HOSPITAL.

Messrs. W. H. Benyon, fine art publishers, of Hewlett-street, Cheltenham, have forwarded to us a set of eight advance proofs from drawings of Guy's Hospital, by Mr. Hanslip Fletcher. The plates are collotype reproductions from sketches made this year, and they give a faithful and artistic representation of the hospital as it is to-day. The subjects of the drawings are "The Gateway and Quadrangle," "Clinical and Medical Wards from the Park," "Clinical and Dental School," "The Colonnade," "Balcony of Martha Ward and Trees in Springtime," "The Ship and Shovel," "Medical Wards and College from Maze Pond," and, finally, the interior of "The Chapel." The artist has, we think, caught the spirit of Guy's Hospital, and several of his sketches, notably those of the front quadrangle and of the colonnade, show much artistic skill. The series is well reproduced and mounted, and is sure to prove popular among Guy's men past and present. It shows how this famous institution has grown of late years and yet contrived to preserve its identity. The publishing price of the set, we are informed, is 31*s.* 6*d.*

THE HYGIENIC AND ECONOMIC ASPECTS OF GAS HEATING AND LIGHTING.

THAT the question of whether gas is a healthy heating and illuminating agent is being vigorously studied clearly appears from two interesting papers read this week at the conference of the British Commercial Gas Association in Manchester. In one of the papers referred to, the author, Mr. H. H. Creasey, gives some forcible illustrations of the difficulty of removing the prejudice against gas firing, which is, reasonably enough, founded on the fact that until fairly recently gas stoves have been defective in construction or else have been fixed by incompetent workpeople. By inaugurating a campaign having for its object the adoption of a system of control whereby the right stove was supplied and the right people engaged to attach it to the existing fireplace, Mr. Creasey has effected many conversions even on the part of those who resolutely set their minds against gas heating as a principle which could lay any sort of claim to being effective or hygienic. The gas industry now claims amongst its converts many medical men, who know well enough when an offence against health is being perpetrated. We have urged all along that when attention is carefully given to the conditions demanded by a gas fire for its satisfactory working, which can be done by handing the installation over to responsible officials, the system would soon find favour by reason of its efficiency and economy. In another paper Professor Vivian B. Lewes, F.C.S., F.I.C., discussed the hygienic aspects of gas for heating and lighting in the home, school, and workshop. His paper bears out what we said in an annotation last week in regard to the character of the seasonal fogs of the metropolis. He concludes, after an able exploration into the many aspects of the case, that gas as *now* used in the incandescent burner and modern gas-fire is by far the most hygienic illuminating and heating agent that we possess for rich and poor alike. (The italics are ours, made with our attention fixed on the great strides made in gas appliances since an inquiry on this subject was conducted by THE LANCET Commission 21 years ago.) Professor Lewes says that, according to his investigations, the dwelling-house, school, and workshop are all rendered more healthy by the action of an efficient gas fire, while the change that has taken place in the atmosphere of our large towns during the past ten years—the lessening of smoke, the rarity of bad fogs, and the increase in the hours during which the sky can be seen—bear eloquent testimony, he considers, to the work already done by the partial displacement of the coal fire by the gas stove.

HORSE-FLESH AS FOOD.

IN the course of his report on "The Economic Development of France in 1910–11," Mr. William Gastrell, H.M. Consul-General at Paris, mentions that the first butcher shop for horse-flesh was opened in that city as long ago as 1866. A few years later, during the siege, horse-flesh was largely consumed. It is chiefly in towns where there is a large working population that horse-flesh is eaten, and it has been said that it sometimes amounts to 11 per cent. of their total consumption of meat. In other places it is hardly used at all. The amount consumed per head has been quoted as four kilos. at Reims, 2¼ kilos. at Lisle, and 1 kilos. at St. Nazaire. In Paris, in 1899, it was stated to be 2·388 kilos., the number of horses slaughtered having been 17,942. In 1907 there were killed in Paris 49,293 horses, 921 donkeys, and 231 mules. The retail prices of horse-flesh in 1909 were officially given as follows by the French Board of Agriculture:—1*s.* 9*d.* to 2*s.* per kilo. (2·2 lb.) for *filet*; 1*s.* 6*d.* to 1*s.* 8*d.* per kilo. for *faux-filet*; and 6*d.* to 1*s.* 6*d.* per kilo. for *tranches* and *côtes*.

HEALTH IN THE PHILIPPINE ISLANDS.

Mr. M. Paske Smith, Acting British Vice-Consul at Manila, writes in his annual report that at the close of the year 1911 health conditions in the Philippine Islands were most promising. The death-rate among adults compares not unfavourably with that of the United States and Europe. Efforts are now being made to deal with the great infant mortality. Owing to the prevalence of plague in China stringent quarantine regulations were made, with the result that the disease was kept out of the islands. Cholera is non-existent. Small-pox has found but few victims, and of those the greater number were children who had not been vaccinated. The leper colony at Culion has proved a complete success, and all known cases of leprosy are segregated there.

Messrs. Aplin and Barrett, &c., Limited, have won a gold medal for the finest collection of British dairy produce at the London Dairy Show. This, we are informed, is the tenth time that the firm has won this prize since 1902—a remarkably consistent record.

ERRATUM.—We are requested to state that in the advertisement of the Challenge Rubber Mills in THE LANCET of last week the distances covered in the tyre test were incorrectly given, and should read: Victor, 5010 miles; Dunlop, 4767½ miles; Continental, 4261 miles; and Michelin, 3799 miles.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

TUESDAY.

SECTION OF MEDICINE (Hon. Secretaries—Robert Hutchison, H. Batty Shaw): at 5.30 P.M.

Sir John Broadbent, Bart.: Case of Rupture of an Aneurysm of the Aorta into the Right Auricle, with Pleural Effusion requiring Repeated Tapping.

(Members of the Section who can contribute allied cases are invited to bring them forward and to join in the discussion.)

SECTION OF PSYCHIATRY (Hon. Secretaries—R. H. Cole, Bernard Hart): at 8.30 P.M.

Presidential Address:
Sir George H. Savage, M.D.

WEDNESDAY.

SECTION OF OPHTHALMOLOGY (Hon. Secretaries—J. Herbert Parsons, Leslie Paton): at 8.30 P.M.

Inaugural Business Meeting:
(1) To Elect Three Vice-Presidents and One Member of Council.
Nominations for Vice-Presidents:—
Mr. George Berry (Edinburgh),
Mr. Edgar Browne (Liverpool),
Mr. J. B. Story (Dublin).
Nomination for Council:—
Dr. Hill Griffith (Manchester).
(2) To approve Draft Regulations for Section.
(3) Other Business.

The Library and Rooms of the Society will be open for inspection by new Fellows and Members of the Section who have not yet had an opportunity of seeing them.

FRIDAY.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—H. S. Clogg, F. Langmead, P. N. Blake-Odgers): at 4.30 P.M.

Cases:
Dr. Porter Parkinson: Congenital Syphilis with Hæmaturia.
Mr. Philip Turner: Thrombosis of Lateral Sinus followed by Thrombosis of Facial Vein.
Mr. Sydney Stephenson: Ocular Torticollis.
Dr. Reginald Miller: Cerebral Maldevelopment.
Mr. Maynard Heath: Genu Valgum due to Rarefaction and Deformity of Femur.
Mr. Duncan Fitzwilliams: Extreme Coxa Vara.
Dr. F. J. Poynton: Congenital Family Cholæmia.
Mr. T. H. Kellock: Traumatic Pancreatic Cyst after Operation.
Dr. Edmund Cautley: (1) Partial Aphasia; (2) Renal Sarcoma.

Specimen:
Dr. Alexander Morison: Malformation of Heart.

Papers:
Dr. E. C. Williams: Notes on a Case of Precocious Development in a Boy, aged Six Years, with photographs.
Dr. Leonard Guthrie: Epidemic Catarrhal Jaundice.

SECTION OF BALNEOLOGY AND CLIMATOLOGY (Hon. Secretaries—A. Manuel, Chas. W. Buckley): at 5.30 P.M.

Presidential Address:
Dr. Percy Lewis: Sepsis and Spa Treatment.

(The ANNUAL DINNER of the Section will be held at the Café Royal, Regent-street, at 7.45 P.M.)

SECTION OF EPIDEMIOLOGY (Hon. Secretaries—G. S. Buchanan, William Butler): at 8.30 P.M.

Presidential Address:
Dr. W. H. Hamer: The Influence of Migration upon the Phthisis Death Rate.

MEDICO-LEGAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

TUESDAY.—8.30 P.M., The President (The Right Hon. Earl Russell): Annual Address.—Dr. F. G. Crookshank: Delayed Shock.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—9 P.M., The President (Mr. A. H. Tubby): Address. 9.15 P.M., Discussion on Intravenous Anæsthesia:—Mr. E. G. Schlesinger, and Messrs. H. S. Soutar and H. L. C. Noel will demonstrate Apparatus; Mr. C. M. Page will speak on Intravenous Hedonal; and Mr. J. F. W. Silk, Mr. H. E. G. Boyle, Mr. W. F. Cross, Mr. F. S. Rood, and Mr. A. Daly will take part in the discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY.—5 P.M., Mr. S. G. Shattock: Specimens illustrating Diseases of the Genito-urinary Organs. (Museum Demonstration.)

WEDNESDAY.—5.30 P.M., Mr. J. F. Colyer: John Hunter's Specimens illustrating the Formation and Growth of Teeth. (Museum Demonstration.)

FRIDAY.—5 P.M., Prof. Keith: New Additions to the Collection of the College Museum—Specimen illustrating the Result in a Case where the Condition of Imperforate Anus was Unrelieved; Specimens illustrating the Comparative Anatomy of the Prostate; Sexual Organs of Eunuchs; and Undescended Testicles. (Museum Demonstration.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. W. Evans: Clinique (Skin). 5.15 P.M., Lecture:—Dr. T. G. Stevens: Salpingo-oöphoritis.

TUESDAY.—4 P.M., Dr. W. H. Willcox: Clinique (Medical). 5.15 P.M., Lecture:—Dr. W. Hill: The Diagnosis and Treatment of Strictures of the Œsophagus. (Lantern demonstration.)

WEDNESDAY.—4 P.M., Mr. W. S. Handley: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. H. C. Miller: Rest Cures in Theory and Practice.

THURSDAY.—4 P.M., Dr. G. Stewart: Clinique (Medical). 5.15 P.M., Lecture:—Mr. A. H. Tubby: Obscure Affections of the Foot.

FRIDAY.—4 P.M., Dr. W. H. Kelson: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 11 A.M., Mr. Addison: Demonstration of Minor Operations 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. B. Harman: The Effects of Tobacco Smoking on the Eyes.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Mr. T. Gray: Demonstration of Fractures, &c. 11.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin 5 P.M., Lecture:—Dr. Davis: Diseases of the Throat and Nose.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations on the Throat, Nose, and Ear. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Owen: Clinical, with Cases.

THURSDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Lecture:—Dr. Owen: Practical Medicine. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Davis: Diseases of the Ear.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. G. Holmes: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. Singer: Medical. Mr. A. J. Walton: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.15 P.M., Sir M. Morris: Skin Clinique (alternate Tuesdays).

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Mr. P. Cole: Surgical. 11 A.M., Mr. R. E. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery.

THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. G. Holmes: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. Dr. A. Davies: Pathological Demonstration. 3.15 P.M., Dr. R. Wells: Medicine. 4.30 P.M., Special Lecture:—Mr. P. P. Cole: Cancer of the Rectum.

FRIDAY.—Out-patient Demonstrations;—10 A.M., Dr. C. Singer: Medical. Mr. A. J. Walton: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine. 3.15 P.M., Mr. L. McGavin: Surgery.

SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Mr. P. Cole: Surgical. 11 A.M., Mr. R. E. Bickerton: Eye.—10 A.M., Dr. W. Steuart: Radiography.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City road, E.C.

MONDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. M. Leslie; Room IV., Dr. S. Thompson. 4 P.M., Wards, Dr. M. Leslie. 4.30 P.M. to 5.30 P.M., Lecture Hall, Lecture-Demonstration.

TUESDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. Phear; Room IV., Dr. B. King. 2 P.M., Operations and Throat Clinic, Mr. A. Evans. 3 P.M., Wards, Dr. White. 3.30 P.M., Wards, Dr. Phear. 4.30 P.M., to 5.30 P.M., Lecture Hall, Lecture-Demonstration.

WEDNESDAY.—2 P.M., Wards, Dr. A. Davies. Out-patient Department—Room III., Dr. Drysdale; Room IV., Dr. Kellie. 4 P.M., Wards, Dr. Drysdale. 4.30 P.M., Roentgen Ray Department, Dr. Jordan. 7 P.M., Department for the Prevention of Consumption.

THURSDAY.—9.30 A.M., Dental Department, Mr. G. Thomson. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. M. Leslie; Room IV., Dr. S. Thompson. 4.30 P.M. to 5.30 P.M., Lecture Hall, Lecture-Demonstration.

FRIDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Wards, Dr. Calvert. Out-patient Department—Room III., Dr. Phear; Room IV., Dr. B. King. 3.30 P.M., A Special Clinical Demonstration by one of the Out-patient Physicians.

SATURDAY.—10 A.M., Out-patient Department—Room III., Dr. Drysdale; Room IV., Dr. Kellie. 11.30 A.M., Roentgen Ray Department, Dr. Jordan.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. H. Howell: Lumbar Puncture and Examination of Cerebro-Spinal Fluid.—5 P.M. Dr. S. A. K. Wilson: Neuropathology. (Special Course.)

WEDNESDAY.—5 P.M., Dr. J. Collier: The Clinical Examination of Cases of Disease of the Nervous System. (Special Course.)

THURSDAY.—5 P.M., Dr. C. M. H. Howell: Anatomy and Physiology of the Nervous System. (Special Course.)

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. H. Howell: Sensory Disturbance in Nervous Disease.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4.30 P.M., Dr. Miller: Some Points in the Ætiology of Tuberculosis.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.

THURSDAY.—4 P.M., Mr. E. M. Corner: Joint Diseases and their Surgical Treatment.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

FRIDAY.—3 P.M., Inaugural Lecture:—Dr. D. Grant: Some Views in Oto-Rhino-Laryngology Reviewed; Some Criticisms Criticised.

LISTER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea Gardens, Chelsea Bridge-road, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Bacot: Bionomics of Fleas, Human, Rat, and Dog Species, with an Account of Laboratory Methods of Treatment and Rearing Fleas for Experimental Purposes.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Mr. W. Hampson: X Rays. The Tube and its Control.

THURSDAY.—6 P.M., Dr. M. Dockrell: Eczema, its Varieties, Symptoms, and Causes.

QUEEN'S HOSPITAL FOR CHILDREN, Board Room of the Hospital, Hackney-road, N.E.

WEDNESDAY.—4 P.M., Mr. W. S. Fenwick: The More Common Forms of Rupture in Children and their Treatment.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. E. B. Leech: Some Abdominal Cases. (Post-Graduate Clinic.)

MANCHESTER ROYAL INFIRMARY.

FRIDAY.—4.30 P.M., Mr. J. W. Smith: The Treatment of Hæmorrhoids. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

TUESDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (23rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (24th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex

(1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M. Aural and Ophthalmic), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M and 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (26th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.) Hospitals operations are performed daily. At the Western Ophthalmic Hospital operations are performed on Monday, Tuesday, Thursday, and Friday at 3 P.M., and on Wednesday and Saturday at 11 A.M.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1912:—

Oct. 8th–22nd (Rome).—International Congress on the History of Art.
,, 17th–23rd (Paris).—First International Congress of Comparative Pathology.
,, 24th–27th (Rome).—Fourth International Congress of Physical Education.
,, 29th–Nov. 2nd (London, Royal Horticultural Hall).—Twenty-third Universal Cookery and Food Exhibition.

In 1913:—
(Easter week) (Berlin).—Fourth International Congress for Physiotherapy.
April 26th (Ghent) (opens).—International Exhibition.
Aug. 6th–12th.—(London).—Seventeenth International Congress of Medicine.
Sept. 2nd–6th (Groningen).—International Physiological Congress.
,, 22nd–28th (Milan).—Fourteenth International Anti-alcoho Congress.
September (Birmingham).—British Association.
(London).—Historical Medical Exhibition. (Organised by Mr. Henry S. Wellcome.)
(London).—International Historical Congress.
(Chicago).—Congress of the International Association of Refrigeration.
(Washington).—Congress of American Physicians and Surgeons.
(Paris).—Congress of Physical Education.
(Paris).—Congress of the Royal Institute of Public Health.
(Buffalo).—Fourth International Congress of School Hygiene.

In 1914:—
(Vienna).—Third International Congress for Professional Diseases.
(Auckland, N.Z.).—Australasian Medical Congress.
(St. Petersburg).—Third Mendeléeff Congress of Pure and Applied Chemistry and Physics.
(Washington, D.C.).—International Congress of Americanists.
(London).—International Dental Congress.
(Paris).—Fourth International Medical Congress on Industrial Accidents.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.
We cannot prescribe or recommend practitioners.
Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."
Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*
We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 16th, 1912.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Oct. 10	30·30	E.	...	89	64	45	46	47	Hazy
,, 11	30·28	S.	...	54	54	41	43	43	Foggy
,, 12	30·30	S.E.	...	62	57	42	42	42	Foggy
,, 13	30·26	S.W.	...	90	63	42	45	47	Cloudy
,, 14	30·15	S.	...	70	62	47	54	57	Overcast
,, 15	30·38	S.W.	0·05	67	55	44	44	45	Foggy
,, 16	30·15	S.W.	...	90	58	42	45	46	Hazy

The following journals, magazines, &c., have been received.—West London Medical Journal, Archives Générales de Médecine, London Hospital Gazette, Deutche Zeitschrift für Nervenheilkunde, Journal d'Urologie, Archives de Higiene, Revue de Chirurgie, Revue de Médecine, La Clinique Ophthalmologique, Cleveland Medical Journal, Medical Chronicle, Maryland Medical Journal, Guy's Hospital Gazette, Monthly Cyclopedia, Archives de Médecine et Pharmacie Navales, St. Thomas's Hospital Gazette, American Journal of Surgery, St. Paul Medical Journal, Midland Medical Journal, Newzealand Medical Journal, Archives de Médecine et de Pharmacie Militaires.

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